Infrahumanization As A Function Of The Meanings Made of Inter-Group Relationships

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April 2012

A thesis submitted for the degree of Doctor of Philosophy of The Australian National University.

Words: 75,777

DECLARATION

The research reported in this thesis is my own and has not been submitted for a higher degree at any other institution.

Aurore Lynn Chow

For the "Infrahumans"

ACKNOWLEDGEMENTS

Working on my PhD has been the best "job" that I've had thus far. It has been extremely challenging (I may have even complained once or twice), but also stimulating, rewarding, and a great deal of fun. For that, my thanks go to everyone who helped me along the way and with whom I shared the experience. My "boss," Michael Platow has provided a good mixture of hands-on guidance and hands-off space to experiment and grow. My other "bosses" on my supervisory panel, Mike Smithson and Boris Bisumic, have been willing to step in when the time came for a fresh perspective. My special thanks goes to Nick Haslam for being so generous with your time and for throwing around ideas whenever I popped down to Melbourne or accosted you at a conference.

The psychology department at ANU has been a great intellectual environment for filling in the aspects of the PhD that are outside of writing the thesis. I have appreciated everyone who contributes to the post-graduate Reading Group and the broader Groupthink. I had a great cohort of "coworkers" with whom to collaborate and commiserate, including three outstanding office mates. Ruth, thank you for showing me the ropes and demonstrating that it is actually possible to eat the elephant. Ben, thank you for knowing when I wanted to work and when I wanted to chat. Li, you have been a great mate, whether it was helping gather data at the cold footy game, wading through Tabachnick and Fidel together, or trading recipes for distraction.

I must express my appreciation for my fellow inmates in the dungeon office. Angelique, Cath, and Dan, you made overtime hours not feel so bad. I have also been lucky to meet and work with colleagues overseas who became my collaborators. I express my heartfelt thanks to Monika, Sole, Chiara, and Steve for making Study 7 of the thesis possible with data collection and discussion of ideas.

To my family, thank you for raising a nerd and for giving me your blessing on this journey. And finally to Jong… as clichéd as it sounds, I wouldn't be here if it weren't for you. Thank you for believing in me and helping me to believe in myself. You are the best home to go back to at the end of the day.

ABSTRACT

Infrahumanization is an inter-group process in which group members do not see members of a different group as possessing equal humanness to that of their own group. This is equivalent to omission from the superordinate human in-group. The infrahumanization effect is most commonly operationally defined as occurring when more uniquely human emotions or traits are attributed to a participant's own group relative to a relevant out-group and non-uniquely human emotions or traits are attributed equally between the groups. Studies have shown that infrahumanized groups are granted less help and forgiveness, morally excluded, and that violence towards such a group results in less guilt. These effects have been replicated in a number of studies, mostly using nationality or ethnic inter-group contexts.

The theoretical framework of this thesis couches infrahumanization in terms of Social Identity Theory and Self-Categorization Theory as an outcome of social identity processes when the relevant dimension of inter-group comparison is humanness. Additional theoretical work draws comparisons between infrahumanization and other inter-group processes, including moral exclusion, dehumanization, delegitimization, and in-group projection, hypothesizing that the processes may be elicited by similar necessary and sufficient conditions. The theoretical section concludes with four overarching hypotheses for the thesis.

The initial aim of the thesis is to contribute to the body of literature analysing the necessary and sufficient conditions required to elicit infrahumanization. However, in five systematic studies, the effect is not observed in Australian samples, despite using several different inter-group contexts and using various measures of infrahumanization. At the same time, it is clear that other inter-group processes are at work such as in-group favouritism in altruism and point allocation measures.

The sixth study is key to the thesis, in that it is the first observation of denial of uniquely human traits to an out-group in an Australian context. It also observes differential attribution of humanness traits depending on the nature of the inter-group relationship. However, this is with a human-animal inter-group context so the ability to draw conclusions on human inter-group infrahumanization is limited. The final study is cross-cultural, comparing attribution of three dimensions of humanness in samples in Australia, Spain, Switzerland, and Poland with two different inter-group contexts.

In this final study, the methodology of the previous studies in the thesis is supported, as some inter-group contexts result in the infrahumanization pattern of humanness attribution. Broadly speaking, out-groups are denied humanness relative to in-groups. Infrahumanization patterns of emotion attribution are often qualified by valence, as is evident in previous studies in the thesis, resulting in patterns more similar to in-group favouritism.

The study therefore provides evidence that while infrahumanization is not common to all inter-group relationships, infrahumanization can occur in an Australian context. Published work has attempted to identify certain necessary and sufficient conditions (i.e. conflict or perceived morality) that will elicit infrahumanization. Based on the data, I argue, instead, that infrahumanization is the result of a complex interplay of characteristics in the meanings made of the inter-group context and of inter-group dynamics such as positive distinctiveness and boundary permeability.

TABLE OF CONTENTS

List of Tables

List of Figures

CHAPTER1: PREAMBLE

This thesis deals with lay attributions and denials of characteristics of humanness to targets who are, biologically speaking, homo-sapiens. Therefore, the thesis requires an operationalization of what it means to be human. What is "humanness?" It is a question that has answers in legal, philosophical, medical, as well as lay domains. It is difficult to generate a definition that manages not to exclude some group of people, as there is so much variation within our human species. Most fields agree that "cognition" is an aspect that defines humanness. But what constitutes cognition varies from theory to theory (Campbell, Cranley Glass, & Charland, 1998). For example, philosophers Aristotle and Kant believe that to be human was to have the capacity to reason (Campbell, et al., 1998). But this definition would exclude children up to a certain age. Others say it is a functioning human brain which is the key defining feature. Noting that this definition would exclude people in a comatose state, Coope argues that this definition is insufficient as "we do not suddenly cease to be human beings when we are knocked unconscious" (Coope, 1995, p. 100).

In 1977 a committee of academics, professionals, and members of the clergy produced a report entitled "Considerations Concerning the Passage from Life to Death." As part of considering dying, the group needed an operational definition of what it means to be a living human (Walmsley, 1978). Their definition is that an individual is human in the degree to which he or she can establish relationships. Campbell et al. (1998) also argues that there is a social aspect to what it means to be human. However, this definition could be seen to exclude a large portion of the mentally and physically disabled of society.

Szathmary and Szamado (2008) assert that language is what sets humans apart from other animals; it is what makes humans unique. Among other "characteristically human traits," Szathmary and Szamado include the ability to fashion tools, or the

capacity to learn (Szathmary & Szamado, 2008, p. 40). In another model, Dreyfus (1967) asserts that to have feelings or emotions is to be human, observing that while all people have the potential to be human, some deny or cloister their emotions and thus fail to fully embody their humanness.

Because this work addresses lay perceptions of humanness, what is important is not a technical, scientific or theoretical definition of humanness, but, rather, a lay definition. That is, I am measuring lay perceptions of humanness, so to impose an theoretical structure of what it means to be human is not suitable. Research shows that the lay definition of humanness is made up of three aspects, somewhat reflective of the above observations by Szathmary and Szamado (2008), Dreyfus (1967), and Campbell et al. (1998). The aspects include language, cognition and emotion (Leyens et al., 2000a).

The focus of this thesis will be on infrahumanization, the attribution of greater humanness to a person's own group than a different group, based on human emotions[1]. Research has shown that, in general, societies have lay conceptions of certain emotions being unique to humans and other emotions being potentially felt by animals as well (Leyens et al., 2000b). That means that by either implicitly or explicitly granting or denying those "uniquely human" emotions to an out-group, a person effectively acknowledges or denies the humanness of that group. This thesis investigates the inter-group context and measures attribution of humanness to an out-group relative to an individual's own group. Consistent with the usage in the literature, I will call this inter-group denial of humanness, infrahumanization.

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[1] In the literature, infrahumanization is always described as greater attribution of humanness to an in-

Theoretical Overview

To introduce the topic of infrahumanization, I begin with the following quote from Wallace Stegner's "Angle of Repose" (p.199).

> "She had rooms in her mind that she would not look into. Yet she was much liked by the Cornish women who came visiting, and apparently needed no other company, was less obviously lonely than Susan. Susan wondered if her own discontent was a weakness or if it was only a manifestation of greater sensibility. Was there something gnarly and tough about working-class people that kept them from feeling all that more delicately organized natures felt? If Georgie died, would Lizzie be prostrated, apathetic, and despairing as Augusta still was, or would she rise in the morning, supported by some coarse strength, and build her fire and make breakfast and go on as before?"

In this quote, the writer, Susan, a well-to-do artist, imagines the emotional experience of her maid, Lizzie. In the wake of hearing the devastating news of her friend Augusta's miscarriage, the writer wonders if, upon losing her own child, Georgie, Lizzie would experience the full depth and breadth of emotion that her friend Augusta now experiences, or that she herself would experience. In doing so, she is asking if those of the lower class experience the same profound and complex emotions as those of her own class. The writer is infrahumanizing those of a lower class, and consequently, she is infrahumanizing her maid. That is, she is attributing less of what it means to be uniquely human (in this case, complex emotions) to a group that is different from her own.

We see in this quote several important aspects of infrahumanization. Firstly, it is implicit. The writer is not aware of her bias. If asked, she certainly would not describe the lower classes as less *human* that the upper classes. Secondly, infrahumanization is only denying humanness of an out-group by degree. The writer is

not comparing Lizzie to an animal or saying she has the emotional capacity of a robot. Third, infrahumanization will not necessarily be accompanied by violence or overt inter-group harm. The writer will not act out against her maid based on this musing. Yet, finally, at the same time, such feelings or beliefs may allow the writer to excuse treatment of Lizzie that she would not direct towards members of her own social class.

In summary, infrahumanization is an inter-group process in which members of a group see members of another group as less human than their own group. The understanding of it as social phenomenon rests on several assumptions. The first is that social group formation, maintenance, and interaction can be partially explained based on the principles of Social Identity Theory (SIT) (Tajfel & Turner, 1979) and Self Categorization Theory (SCT) (Turner, 1982). A full description of the theories will be given in Chapter 3, but it is important to give an overview prior to explaining infrahumanization in more detail. According to SIT, a person has both personal and social identities. Social identities can be based on any of a long list of social groupings such as gender, nationality, religion, and ethnicity. As with personal identities, people can garner positive self-esteem from their social identities (Turner, 1982). This positive self-esteem comes in part from making inter-group comparisons between groups that favour their group over others. In this way, they want to see their own social groups favourably in comparison to other social groups. This process may be facilitated by discriminating against other groups. This discrimination may take place in the form many processes, such as prejudice, stereotyping, in-group favouritism, and infrahumanization (S. A. Haslam, 2004).

The next two assumptions are that one of the ways in which social groups evaluate each other is in terms of humanness, and that this humanness can be granted by degrees (N. Haslam, 2006). A social group member may view an out-group as

possessing varying degrees of humanness in relation to his or her own group. This evaluation is most likely to be implicit rather than explicit, and conceived in terms of one of the three lay conceptions of what makes humans unique from other beings: language, intelligence, and uniquely human emotions, (Leyens, et al., 2000a). For example, in the domain of uniquely human emotions, in indicating that out-group members experience less of the emotions that make humans unique from animals, a person is implicitly placing the out-group closer to the animal end of the human-animal continuum than the in-group. In this way, the person is infrahumanizing the out-group.

The fourth assumption is that the treatment of an out-group is based on a group's evaluations of an out-group. If these evaluations are made in favour of the in-group, they may act as a means of improving group based self-esteem. This includes evaluations of that out-group's humanity. This assumption finds support in research on the negative consequences of stereotyping (Gervais & Vescio, 2007), racism (Dovido & Gaertner, 1998; Jones, 1999), and other in-group favouring attitudes (Verkuyten, 2007). When group members favour their own group over another target out-group, or have racist views towards them this often has negative consequences for the treatment of the target group. Denial of humanity is akin to racism, and in-group favouritism, as it involves favouring the in-group over the out-group. Therefore, infrahumanization should have similar outcomes to those processes.

The fifth assumption is that social group members have a conception of morality that guides treatment of others. All cultures live by a moral code which dictates what behaviour is considered morally acceptable (Opotow, 2004). Moral treatment is typically reserved for humans, and does not necessarily apply equally for animals and automata. Therefore, the moral treatment of out-group members is based on the degree to which they are considered within the superordinate human group. When the humanness of an out-group is not believed to be equivalent to that of the in-group, a

group member is not obligated to extend equal moral treatment to the out-group that would be required for the in-group. This can include discrimination or even violence (Opotow, 1990).

As has been described, the focus of this thesis is on infrahumanization, or the denial of full humanness to members of one group by another. It has been shown to have serious implications for inter-group relations. As a review of the literature will show, denying the full humanness of a group in this way can result in mistreatment of that group. Unfortunately, it is not a phenomenon confined to only the most brutal acts of genocide such as cases of Rwanda, Darfur, Cambodia, WWII Europe, though it was certainly present there. It happens when, in Los Angeles, a father expects to see a "monster" in the face of his son's killer, but instead sees a "normal youngster" (Finnstrom & Cary, 2008, p. 1). In subtly denying the equal humanity of an out-group, a group member is no longer bound to treat the out-group member with the same moral considerations as the in-group. Indeed, infrahumanization has been found to result in consequences such as less prosocial behaviour (Vaes, Paladino, & Leyens, 2002), less forgiveness (Tam et al., 2007; Tam, Hewstone, Kenworthy, & Cairns, 2008), less helping (Cuddy, Fiske, & Glick, 2007a) as well as excusing past wrongs of the in-group towards the out-group and therefore deflecting feelings of guilt and blame (Castano & Giner-Sorolla, 2006).

Empirical Overview

Following this brief theoretical overview and before a more in-depth theoretical analysis, I would like to provide an overview of the thesis, to outline how the work in this thesis progressed over time.

In reading work on infrahumanization, I saw it as a field extremely worthy of study for the combination (similar to prejudice and stereotyping) of the seeming regularity of its occurrence (based on the existing literature) and its demonstrated

negative effects. But I also saw much room for refinement of the theory on infrahumanization and ways in which the field could expand.

In particular, I saw that there were gaps in the theoretical understanding of the moderating variables that determine when infrahumanization happens, and a lack of identification of the necessary and sufficient conditions required to induce infrahumanization. Therefore, in the first five studies, drawing from research on similar inter-group processes, I began to analyse specific variables and their relation to infrahumanization. Another goal was to broaden the variety of inter-group relationships in which infrahumanization has been studied, as most studies focus on nationality as the inter-group context (Castano & Giner-Sorolla, 2006; Cehajic, Brown, & Gonzalez, 2009; Costello & Hodson, 2011; Cuddy, Rock, & Norton, 2007b; Delgado, Rodriguez Perez, Vaes, Leyens, & Betancor, 2009; DeLuca-McLean & Castano, 2009; Demoulin et al., 2005; Gaunt, 2009; Paladino et al., 2002; Paladino, Vaes, Castano, Demoulin, & Leyens, 2004; Vaes & Paladino, 2010b; Wohl, Hornsey, & Bennett, 2011).

In the first study, I sought to examine moderators of infrahumanization, specifically in the form of threat (for reasons that will be explained in the following chapters). The inter-group context chosen was nationality, and the dependent variable was uniquely and non-uniquely human emotion attribution, according to prior research in the field (Castano & Giner-Sorolla, 2006; Cehajic, et al., 2009; Costello & Hodson, 2011; Cuddy, et al., 2007b; Delgado, et al., 2009; DeLuca-McLean & Castano, 2009; Demoulin, et al., 2005; Gaunt, 2009; Paladino, et al., 2002; Paladino, et al., 2004; Vaes & Paladino, 2010b; Wohl, et al., 2011). The result was that I did not observe infrahumanization in a similar context to ones in which it had been found in other countries. I identified the possible confound of stereotype content that was in the design and conducted a second study to account for this confound; however, in Study 2 there

was still no expression of infrahumanization in a migrant-Australian inter-group context.

In the next three studies, I continued to pursue analyses of moderating variables of infrahumanization, as well as necessary and sufficient conditions for its expression. However, in order to study infrahumanization, I needed to identify an inter-group context in which I would see the effect. So this next series of studies tested different inter-group contexts, some of which had already been studied in the broader literature, but this time using an Australian sample. I tried to increase the salience of the inter-group context, so that I would observe infrahumanization. While inter-group conflict is not a necessary condition for infrahumanization, it does increase its likelihood (Castano & Giner-Sorolla, 2006), so Studies 3 and 5 employed groups with competitive or conflictual relationships. Study 4 manipulated the morality of the out-group, treating morality as an inter-group context, as well as manipulating the nationality of the out-group. These three studies also tested different measures of infrahumanization to try to eliminate the possibility of methodological error. Still, there was no evidence of infrahumanization in the Australian samples.

Of course, one conclusion that could be drawn from this result is that Australians do not infrahumanize out-groups. But based on the field's understanding of inter-group relations, and a great deal of work on infrahumanization in other countries and related processes such as delegtimization, dehumanization and moral exclusion, this did not seem likely. I had unpublished reports from Australian colleagues demonstrating that they also struggled to find the infrahumanization effect in their samples and with their inter-group contexts (Bain, Haslam, & Kashima, 2010). So the next step was to regroup and try to map out a picture of *Australian* infrahumanization. I planned and conducted two further studies.

Study 6 returned to the most basic inter-group context, for this work, measuring participants' infrahumanization of animals. If Australians did not deny uniquely human characteristics to a group that is objectively non-human, then clearly I could not use the commonly employed methods of studying infrahumanization in an Australian context. This study, not surprisingly, revealed that Australians do, indeed, infrahumanize animals. Once this was established, I returned to the basic design of Study 2 and tested my hypotheses in Study 7 internationally with still different inter-group contexts. This final study showed that Australians can, and will, infrahumanize an out-group, given the right inter-group context, and it lent support to my methodology as well as provided valuable cross-cultural comparisons.

Still, the picture of infrahumanization that I was left with is not one that suggests that it is as common as much of the literature claims. DeLuca (2009, p. 23) writes that infrahumanization happens in "everyday situations", a sentiment that is echoed by other researchers in this area (Demoulin, Cortes, & Leyens, 2009a; Vaes, Paladino, Castelli, Leyens, & Giovanazzi, 2003). I would say, rather, that perhaps infrahumanization happens in situations that are "everyday" in the sense that they are non-violent and even non-conflictual. They need not be situations of war or genocide. However, infrahumanization is not ubiquitous in that it has with very specific causal parameters based on the complex nature of inter-group relations and perhaps even individual differences. Groups cannot be taken as empty categories between which group members will discriminate along the humanness dimension. It is with this end result in mind that the following work can be best understood.

CHAPTER 2: INFRAHUMANIZATION

Overview

There are several terms in social psychology that refer to denying or rejecting the humanness of an out-group, including dehumanization, delegitimization, moral exclusion, and, most recently, infrahumanization. The most general term, and the one perhaps most familiar to most social psychologists, is dehumanisation. Dehumanization is the phenomenon by which a group member comes to see an out-group as not human. At its worst, this process enables antagonistic behaviour such as inter-group violence and even genocide through categorization of the out-group as animals or automata, and not worthy of the same treatment as human groups. It is easy to think of such an extreme process as confined to a few unique historic instances (e.g. the Holocaust). However, it has been found to be rather common in different forms, both historically and currently, in attitudes and treatment of racial groups, criminals, the mentally ill, the mentally handicapped, and medical patients, among others (Goff, Eberhardt, Williams, & Jackson, 2008; N. Haslam, 2006).

Infrahumanization is a process that is related to dehumanization but may be less familiar to a broad audience. The term infrahumanization was coined in the work of Jacques Philippe Leyens in the late 1990s and early 2000s (Leyens, et al., 2000b). Leyens observed that while the effects of dehumanization are tragic and only happen in extreme cases, the roots of dehumanization lie in everyday implicit cognitive processes (Leyens, et al., 2000a). He called this phenomenon infrahumanization, and it is the belief that members of an out-group are somewhat less human than a person's own group. Unlike dehumanization, infrahumanization is the attribution of lesser humanness, and not a complete lack of humanness. From this perspective, humanity is seen as a continuum. One side of the continuum embodies the full human essence. This is where a perceiver's in-group sits on the continuum. The other side is a complete

lack of human qualities. This is where a dehumanized group would lie. The continuum then allows for a wide mid-range in which out-group members are ascribed varying *degrees* of humanity. Therefore, out-group members may not be denied their humanness altogether, but rather denied traits that people believe make humans distinct from animals or automata. This process also allows for negative treatment of the out-group, including fewer out-group helping behaviours (Cuddy, et al., 2007b) and less out-group forgiveness (Tam, et al., 2007; Wohl, et al., 2011).

Infrahumanization is less likely to occur when a person is required to take the perspective of the out-group member (Paladino & Vaes, 2009). These points all reinforce the argument of this thesis, that infrahumanization is highly contextually dependent. Indeed Gaunt (2009, p. 732) comments that, "presumably, not every social group infrahumanizes any other group."

In this chapter I will begin by defining humanness for the purposes of this thesis and then outline the experimental definition of infrahumanization and how it has been measured in previous research. I will then address the potential moderating and mediating variables that have been assessed in the research including essentialism, identification, status, conflict, violence, and ideology. Next I will analyze two types of process by which infrahumanization is thought to occur and, finally, I will address the consequences of infrahumanization.

Initial Studies and Methods

Defining Humanness

So, of what does humanness consist and what is being denied in infrahumanization? Leyens' first step in answering this question was to determine which traits are considered unique to, and defining of, human-kind. He began by conversationally asking friends and colleagues what attributes are unique to humans. Then, he more empirically surveyed both French and Spanish speakers, asking them to

spontaneously suggest what makes humans distinct from animals. The answer was that the lay understanding of humanness is clearly made up of three characteristics: intelligence, language, and the French, *sentiments* (Leyens, et al., 2000a). These were, therefore, taken to be the three "essences" of humanness. From these initial experiments, Leyens and colleagues hypothesized that of these three characteristics, all are necessary and none is sufficient to see an out-group as fully human. Therefore, if only one of the three characteristics is perceived to be lacking, or is denied to an out-group relative to the in-group, then that group is being infrahumanized (i.e., viewed as less human than the in-group). This is important because, when members of a group are no longer fully considered humans, they are consequently no longer owed the treatment reserved for humans, particularly the moral considerations owed to members of the superordinate human in-group.

From this stage of Leyens' work, the question was, to what extent do people attribute those human characteristics to their own group and an out-group. He and others (Paladino, et al., 2002) argued that ample research already focused on language and cognition, finding that denial of either can cause inter-group discrimination (Ng, 2007; Walmsley, 1978)[2]. Therefore, Leyens decided to focus on the less researched third characteristic, *sentiments*. At this point, it is important to clarify the use of the term "sentiment" in French and Spanish in the early literature and how English speakers may understand it.

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[2] While I disagree that ample work has already addressed the infrahumanization of out-groups through language and cognition, it is not a point of focus at present. In the present research, I adhered to tradition and mostly studied infrahumanization through emotion attribution, with the exception of Study 3 which addresses language. There is another factor supporting the choice to study of emotion over intelligence and language. Studies find that both high and low status groups infrahumanize each other. Because intelligence and linguistic ability can be measured more objectively, it may be difficult for low status groups to discriminate positively in these domains. Emotional content, however, is more subjectively observed. This allows for detection of infrahumanization in low status groups who may not be able to as easily dispute superiority of the higher status group in language or competency but who still discriminate in the domain of emotions to make the in-group positively distinct.

The word *émotion* in French and Spanish refers to feelings experienced by both humans and animals (Leyens, et al., 2000a; Leyens et al., 2001). The Roman derived *sentiment,* a word that exists in both French and Spanish, refers to the emotional experience of humans in particular (or "uniquely human" emotions). It is important to note that this emotion distinction, between uniquely and non-uniquely human emotions, has been found to be a result of spontaneous categorizations and not as a demand characteristic of the studies (Demoulin et al., 2004a) . It is an implicit distinction people make without realizing it, and a real and spontaneous distinction they make outside of the experimental demands.

Although there is no single word in English or Dutch that fully captures the meaning of the French and Spanish *sentiment*, research has found that English speaking Americans and Dutch speaking Belgians can also identify uniquely and non-uniquely human emotions. This suggests that the cognitive distinction between the two emotion types does exist in cultures not speaking Romance languages. Indeed, a study by Demoulin, et al. (2004a) found that participants speaking four different languages (French, Dutch, Spanish, English), all used humanness as a dimension on which to categorize emotions.

Experimentally, *émotion* and *sentiment* are referred to in the infrahumanization literature as primary and secondary emotions, respectively (Leyens, et al., 2001). Primary emotions are those that are assumed to be experienced by both humans and animals (e.g., pain, fear, surprise, pleasure) and secondary emotions are those assumed to be experienced only by humans (optimism, humiliation, hope, guilt).

In addition to the basic difference of human uniqueness, there are several other lay distinctions between primary and secondary emotions. Demoulin et al. (2004a) also analysed participants' perceptions of the characteristics of primary and secondary emotions. In addition to humanness, emotions were assessed on their universality;

visibility to others; age of inception; duration of experience; indication of morality; requirement of cognition and internal or external causation; desirability; acceptability; intensity; gender bias; and indication of an individual's sensitivity. For all four samples studied (i.e., English, Dutch, Spanish, and French), compared with primary emotions, secondary emotions are believed to be more internally caused, more cognitive, more moral, less visible, less intense, longer in duration, and appear later in life (Demoulin, et al., 2004a). This work is important as it focuses particularly on the lay understanding of emotion, rather than taking the view of the biological or socioconstructivist perspectives of emotion. It finds that, while the lay and scientific perspectives largely overlap, they do differ, and it is the lay conception with which the infrahumanization research is concerned (Demoulin, et al., 2004a).

Measurement – Emotion Attribution.

Measurement of infrahumanization has used both implicit and explicit techniques (Leyens, 2009). There is no argument in the literature over which is more theoretically valid, and so the type used in the present thesis is the explicit technique. Measurement of infrahumanization is done by measuring the difference in attribution of secondary emotions to the out-group versus the in-group. A group is said to be infrahumanized if there is an interaction between primary and secondary emotion attribution and the group rated. To be considered infrahumanization, the pattern should be that there is a difference between rating of secondary emotions, with greater attribution to an in-group than an out-group (Leyens, et al., 2000a; Leyens, et al., 2001). Studies, therefore, are structured so that the main independent variable is the inter-group context and the dependant variable is the ascription of various primary and secondary emotions to the in-group and the out-group (if the variable is within participants), or just to one group (if the emotion variables are between participants). Both within- and

between-participants designs are present in the literature. As there is no theoretical distinction between them, I used a mixture of both throughout the thesis.

Some studies have used a selection method in which participants selected which emotions from a list that they believed the group was most likely to experience (Leyens, et al., 2000a; Leyens, et al., 2001). Further studies have also used scale measures of emotions, such that the participant rates all emotions by asking, "Please rate to what extent does (the group) experience the following emotions." Ratings were made on a scale from 1 (very little) to 7 (quite a bit) (Cortes, Demoulin, Rodriguiez, Rodriguez, & Leyens, 2005; Gaunt, 2009; Leyens, et al., 2001; Paladino, et al., 2004).

According to Leyens and colleagues' earliest work, infrahumanization has occured when there is a significantly greater attribution of both positive *and* negatively valenced secondary emotions to the in-group compared to the out-group, and when the attribution of primary emotions do not differ between the two groups (Leyens, et al., 2001, study 3). However, this experimental definition of infrahumanization is not always consistent throughout the literature, as will be explained below.

Denial of humanness. Due to the inconsistencies in the literature regarding the interpretation of primary emotions, it is necessary to analyse the different perspectives on primary emotions and the operationalization of infrahumanization. The initial studies of Leyens et al. argued that there was no theoretical reason for primary emotions to be expected to differ between the in-group and out-group. Therefore, they said that infrahumanization should be indicated only by the over-attribution of secondary emotions to the in-group compared to the out-group (Leyens, Demoulin, Vaes, Gaunt, & Paladino, 2007; Leyens, et al., 2000a). Indeed, one of Leyens et al.'s earliest studies (2001), showed no differences in the attribution of primary emotions. Yet, in the same paper, they observed over-attribution of primary emotions to the out-group and interpreted this result as infrahumanization as well (Leyens, et al., 2001, Experiment 1).

Similar to Leyens et al.'s original argument, a study by Cortes et al. makes the hypothesis that "no difference should be observed for the attribution of primary emotions to the different targets because primary emotions are common to humans and animals" (2005, p. 245). Another article makes a similar assessment that because primary emotions are common to both humans and animals, they are not informative in the differentiation between in-group and out-group (Boccato, Cortes, Demoulin, & Leyens, 2007).

However, contrary to Leyens et al.'s original argument, other studies interpret differences in primary emotions as meaningful, and some even claim these primary emotions as indicators of infrahumanization, in addition to secondary emotions (Paladino, et al., 2004). But Leyens restates in a more recent article that to observe overattribution of both primary and secondary emotions to the in-group speaks to a general belief of greater emotionality possessed by the in-group (Leyens, et al., 2007). In sum, there is no clear stance in the literature on the meaning of primary emotion attribution. For the present thesis, primary emotions will be included in analysis as a means of comparison or "baseline." Therefore, in the thesis, infrahumanization will be indicated by a two-way interaction between the group being rated (in-group or out-group) and the level of emotion (primary and secondary), in which there is greater attribution of secondary emotions to the in-group than the out-group and a comparatively lesser difference in primary emotion attribution. Figure 2.1 shows one example of this hypothesized interaction pattern. In this figure, secondary emotions and primary emotions are both attributed to the in-group to a greater extent, but the difference is greater in secondary emotions. Figure 2.2 shows an alternative pattern that is also infrahumanization, in which slightly more primary emotions are attributed to the in-group than the out-group, but the difference between secondary emotions is still greater than primary emotions. These are not the only patterns that would indicate

infrahumanization, but they show the key features of greater attribution of secondary emotions to the in-group than the out-group, and greater difference between secondary emotions and primary emotions.

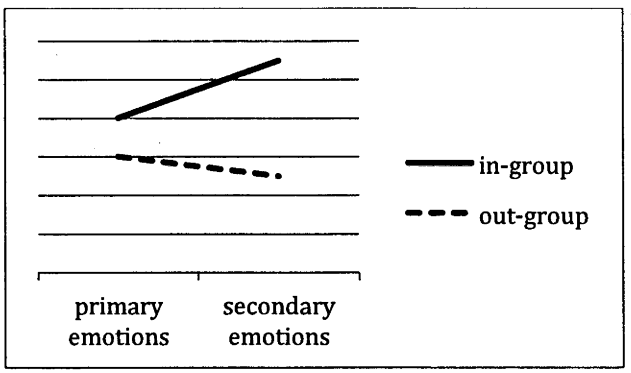

Figure 2.1. Interaction pattern for infrahumanization. Greater secondary emotions to the in-group than the out-group and greater difference between secondary emotions and primary emotions.

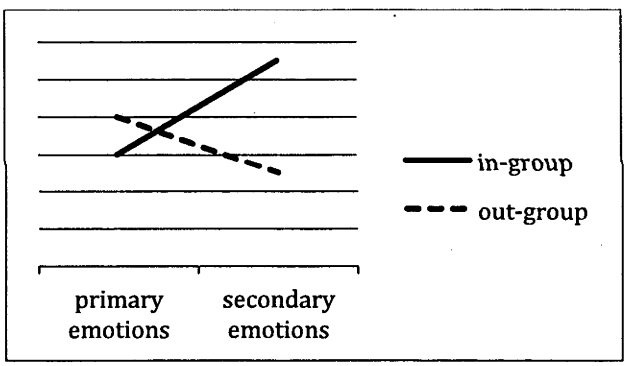

Figure 2.2. Alternative interaction pattern for infrahumanization. Again, greater secondary emotions are attributed to the in-group than the out-group and there is a greater difference between secondary emotions and primary emotions.
Over-attribution of humanness.

When observing the attribution of primary and secondary emotions to an in-group and an out-group, one potential effect is the infrahumanization pattern described above. Another potential pattern is the greater attribution of secondary emotions to an out-group compared to an in-group. This is relevant to the thesis because it is a pattern found in several of the studies. What, then, do we call this type of emotion attribution pattern? In the infrahumanization literature, this pattern has not been described as

infrahumanization of an in-group. Other possible descriptions are "superhumanization" or "suprahumanization" of the out-group. But, should an out-group that is attributed more secondary emotions really be considered superior to the in-group in humanness?

By way of addressing this issue, one study measures attributions of humanness to beings thought to be greater than humans (Demoulin, Saroglou, & Van Pachterbeke, 2008; N. Haslam, Kashima, Loughnan, Shi, & Suitner, 2008a). Demoulin et al. (2008) analysed attribution of primary and secondary emotions to beings that are supernatural, or thought to have greater capacities than humans. They found that God was attributed less primary, but equal secondary emotions as the self. They found that another supernatural being, Satan, was attributed less primary emotions as well but also less secondary emotions than the self. [3]

The finding that I think is of note is the attribution of secondary emotions that show that even God was not attributed with higher secondary emotions than the in-group. If even God (what many consider the highest being) is not attributed with greater secondary emotions than an in-group member, then it does not seem appropriate to describe a human group that is attributed greater secondary emotions than an in-group as "suprahuman" or "super-human." Demoulin et al. (2008) made the point that it is possible that gods differ from humans on different dimensions from how humans differ from animals (language, cognition, and secondary emotions). Therefore, while God was equal to humans on secondary emotions, God would be superior in other

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[3] In this interpretation, attribution of humanness to the "self" is equated with attributions to "humans" in general. While I think this interpretation is problematic, I will discuss the results in the terms used by the authors. Another finding of note in this study was that implicit measures (the specific type of which is not documented) revealed no differences between the target groups. That is, participants did not differentiate Satan and God from humans in emotions on implicit measures, only in explicit. This finding is one example from the published literature of the lack of robustness of the infrahumanization effect. This will be expanded on throughout the thesis.

important ways. Therefore, attributing greater secondary emotions to an out-group would not be likening them to supernatural beings such as God or Satan.

From this research, I do not think "superhumanization" is an appropriate way of describing attribution of greater secondary emotion to the out-group than the in-group. While "infrahumanization" of the in-group seems to be a suitable description for the pattern that is opposite to infrahumanization of an out-group, this term does not appear in the literature. Therefore, I will describe the effect simply as "humanization" of the out-group.

Measurement – IAT and Other Implicit Measures

While the explicit emotion attribution methodology is popular in infrahumanization research, there have been several implicit methods employed to study infrahumanization as well. Leyens et al. (2000a) initially used an adaptation of the Implicit Association Task (IAT) to study infrahumanization because they assumed that people would *not* explicitly attribute greater humanness traits to the in-group over the out-group. The stimuli they used were in-group and out-group names and primary and secondary emotions. They compared response latencies when in-group names were paired with secondary emotions and out-group names were paired with primary emotions to when the opposite pairings were provided. They found evidence that response times were faster when the in-group was paired with uniquely human (secondary) emotions and the out-group was paired with non-uniquely human (primary) emotions. This shows an implicit association for emotion level (primary, secondary) and group (in-group, out-group) (e.g. secondary with the in-group and primary with the out-group). However, it was unclear if the process was association of secondary emotions with the in-group, association of primary emotions with the out-group, denial of secondary emotions to the out-group, or denial or primary emotions to the in-group.

Other researchers have also made use of the IAT in similar studies. In studies by Paladino et al. (2002), participants reacted faster to in-group names paired with secondary emotions and out-group names paired with primary emotions than to in-group names paired with primary emotions and out-group names paired with secondary emotions. From this and the above IAT research we see that infrahumanization can be an implicit process, as the IAT measures implicit attitudes.

Sequential priming procedures have also been used to assess infrahumanization, including the person categorization task (PCT) and the lexical decision task (LDT) (Boccato, et al., 2007; Delgado, et al., 2009). Boccato et al. (2007) reasoned that findings of previous research using IATs of faster responses between the in-group and secondary emotions could be attributed to either association between the in-group and secondary emotions, or between the out-group and primary emotions. From their own findings using implicit measures, they conceptualize infrahumanization as a stronger automatic association between the in-group and uniquely human emotions than between the out-group and uniquely human emotions. They conclude that the significant effects found in previous implicit measures studies are based on the association between in-groups and secondary emotions rather than out-groups and primary emotions.

In a different experimental design, Gaunt et al. (2002) tested participants' memories for pairings of in-group or out-group names with secondary or primary emotions. Though the point is debated, some memory research indicates that people have better memory for information that is inconsistent with beliefs about a group because it requires more processing than consistent information (Smith, 1998; Srull & Wyer, 1989; Stangor & McMillan, 1992). Consistent with this, Gaunt et al. found that participants had better memory for pairings of secondary emotions and out-group names than in-group names. This study supports two propositions. The first is that the connection between emotion and group is driven by beliefs about the in-group and

secondary emotions, as pairings between in-group and secondary emotions were less remembered. This supports the findings of the previous study by Boccato et al. (2007). Secondly, because the study used an implicit recognition memory measure, the data also indicate that beliefs about in-groups, out-groups, and the level of emotions experienced, act at an implicit level.

Frequency

A recent chapter that reviews research on infrahumanization concludes that "despite the variety of paradigms that have been used, results were unanimous at supporting our hypothesis that people generally attribute more secondary emotions to their in-group than to out-groups" (Demoulin, et al., 2009a, p. 156). While it is true that most of the published literature on infrahumanization reports finding the effect, I believe that this thesis will show that the effect is not necessarily as general as Demoulin et al. (2009a) describe,

and that the field would be incorrect to assert that results are "unanimous." Rather, this present work will demonstrate that infrahumanization is a phenomenon that is highly contingent on the meaning made of the inter-group relationship. That is, the degree to which a group member attributes humanness to an out-group is dependent on the way in which the group defines itself in comparison to the other group.

One published study that supports the argument for the contingent nature of infrahumanization is by Marcu, Lyons, and Hegarty (2007). The authors used a qualitative discourse analysis approach to analysing the construction of the human-animal divide in British and Romanian samples. They found that, for both cultures, the places of humans and animals on the "humanity continuum…may vary [as a] function of context or rhetorical purposes" (p. 889). Animals could at once be humanized through the anthropomorphism of pets and then dehumanized to justify animal experimentation for medical purposes. Marcu et al. compare this to the Romanian

treatment of a stigmatized group, the Romas (or 'Gypsies'), saying that while the Romas may be infrahumanized when the inter-group context makes human suffering relevant, they are humanized when the inter-group context makes their popular music relevant.

Another study by Bain, Halsam and Kashima (2010) uses a methodology more similar to that of other infrahumanization work, but again presents inter-group contexts in which infrahumanization would be expected to occur, but did not. In this study, Australian participants were asked to rate the human uniqueness of the in-group (Australians) and four out-groups (Singaporeans, Britons, Indonesians, and Americans). The data showed that ratings of human uniqueness were equivalent between Australians and each of the other countries. That is, there was no infrahumanizations of any of the four out-groups. By giving examples of inter-group contexts in which infrahumanization is not observed, both this study and Marcu et al. (2007) challenge the view that findings are "unanimous" and set the scene for the findings of this thesis.[4]

Context

Overall, studies in infrahumanization have primarily focused on ethnic and national group contexts (Leyens et al., 2003). In these cases, Leyens, et al. (2003) have likened infrahumanization by emotion to the opposite side of the nationalism coin. By this they mean that infrahumanization is a set of implicit beliefs that the people of one's own nation are superior to those of other nations, as opposed to the explicit beliefs of nationalistic sentiments . The favoured group context in the published literature is testing the principles of infrahumanization with the native citizens as the in-group and the most recent and controversial immigrant group as the out-group (Castano & Giner-Sorolla, 2006; Cehajic, et al., 2009; Costello & Hodson, 2011; Cuddy, et al., 2007b;

[4] The studies discussed here used different methodologies. The method of Bain et al. (2010) is more common to the infrahumanization literature than that used by Marcu et al. (2007). Still, both studies measured attribution of humanness to in-groups and out-groups and did not observe consistent denial of humanness traits to out-groups.

Delgado, et al., 2009; DeLuca-McLean & Castano, 2009; Demoulin, et al., 2005; Gaunt, 2009; Paladino, et al., 2002; Paladino, et al., 2004; Vaes & Paladino, 2010b; Wohl, et al., 2011).

Another popular group context has been between language groups of Dutch speaking and French speaking Belgians (Cortes, et al., 2005; Paladino, et al., 2002). More recent work by Demoulin and colleagues (2009b) has found infrahumanization with meaningful, yet far less fundamental group distinctions such as favourite colour and chosen profession. They referred to these groups as "quasi minimal groups" (p. 6) and found that infrahumanization could be measured even for quasi minimal group contexts with relatively low levels of salience and identification. This thesis will use national inter-group contexts as well as other novel contexts.

Mediating and Moderating Variables

The above section described methodological issues, measurement types, frequency of observation, and context. I now turn to outlining the variables that affect the infrahumanization process. The following sections will outline the findings on the contextual variables of status, identification, conflict, violence, threat, and ideology.

Identification and Essentialism

Leyens et al. (2003) postulated, and obtained evidence in support of the view that there are two necessary conditions to infrahumanization; these include both a perceived essentialized difference between groups, and perception that the groups are significantly meaningful. Therefore, Leyens et al. put forth the idea that two moderators of infrahumanization are social identification and essentialism, writing that, "people infrahumanize as a function of their identification with their in-group and to the extent that they look for an essential difference between their in-group and the out-group" (p. 712). First, I look at essentialism.

Essentialism. An essential trait is a deep and natural quality of an organism that determines how characteristics are presented on the surface. Research on psychological essentialism refers to both "natural kinds" and "human artifact" categories (Rothbart & Taylor, 1992). Human artifact categories are those such as home, skirt, and couch that have been conceived of for the sake of organizing the social world. Natural kinds are categories such as dog, flower, and silver, that have their basis in the physical or biological characteristics. It is only natural kinds that have an actual underlying and objective "essence" that defines the category. However, it has been shown that people are prone to treating human artifact categories as natural kinds. Essentialism is, therefore, treating as essential those socially created categories or treating human artifact categories as having an essence.

For example, sex, as a category, which involves biological characteristics that are determined by chromosomes, can be described as a natural kind. But gender, the characteristics which are culturally determined to be masculine and feminine, is a human artifact. Psychological essentialism, however, describes the *belief*, valid or not, that a human artifact, like gender, is a natural kind and that the human artefact has inborn, biological attributes. Essentialism is also the attribution of non-biological characteristics (e.g. intelligence) with a natural kind (e.g. race). This becomes important in social psychology, as the belief in an essentialized social trait, such as gender, will affect how a group is treated. If group members are thought to possess certain traits *by their very nature*, another group will see it as valid to treat them according to those in-born traits.

It is also true that people do not always need to know what constitutes the "essence", but merely that one exists. We can rely on a biologist to tell us that a manatee is a mammal, not a fish, despite the fact that it shares many of what we

consider fishlike qualities. We do not need to understand the anatomic makeup ourselves.

In the social domain, this tendency not to need to identify the essence is crucial, because the "essence" of a social group can be assumed without any direct evidence of its existence. So a group of Australians can believe there is some deep underlying inborn characteristic that determines Australianness, when, in fact, this is just a matter of where a person was born. Again, a human artefact category is being treated as a natural kind. Therefore, what is important in social psychology is not whether a category, such as Australian or New Zealander, has an essence, but whether or not people believe it does. It is this belief that affects behaviour towards socially constructed groups.

Outside of the social realm, the reason people sometimes essentialize non-essential social groupings is because people can often correctly discern between whether or not a trait is essential. If it looks like a fish and acts like a fish, it is probably a fish. However, in the social world, just because it looks a certain way, or is grouped by a human artifact name, does not mean it belongs to that group as a result of a deep underlying natural kind. The social group "Australians" is useful as a human artifact categorization, but if such an attribute as nationality is essentialized and treated as a natural kind, discrimination and prejudice can result. This is important because, in some cases, people feel that discrimination on the basis of natural kinds is legitimate and essentialism can legitimize discrimination.

In the infrahumanization literature, the relation between essentialism and infrahumanization can be explained in the following way. Essentialism is the belief that socially constructed group categorizations are natural kinds. If this belief exists, when social groups differ, people believe that the groups differ in their essence, often specifically in, their human essence. If groups are perceived to differ in human essence,

this perception may manifest in how uniquely human traits, such as language, competence and secondary emotions, are ascribed to them (Paladino, et al., 2004).

The process of infrahumanization and its relation to essentialism (and identification) is succinctly summarized by a quote from Vaes (2006, p. 5):

> If people think that their group is superior to other groups, and attribute different essences to the in-group and out-groups, then it follows that people should ascribe a better essence to their own group. As a consequence, on a dimension as fundamental as humanity, people believe that "the" human essence belongs to their in-group and that the infra-human essence characterizes (some) out-groups.

Identification. The following chapter will focus in more detail on the idea of group formation and identification, but to explain briefly, the social world has many psychological groups with which a person may be aligned. These groups provide a person with information about him or herself and the social world. A person will feel more strongly about his or her alignment with some groups than others (e.g. the gender group to a feminist or the political party to a politician). That is, some groups will be "significantly meaningful groups," and some will not. Leyens et al. (2003) hypothesized that for an individual to infrahumanize an out-group, the relevant inter-group social category must be "meaningful" (p.712). They stopped short of giving this term an operational definition, but suggest that this is identification with the social category.

Therefore, Leyens (2009) suggests that identification with the in-group is a necessary condition, although, not sufficient in itself to trigger infrahumanization in all cases. It has generally been found that infrahumanization is stronger for participants who identify strongly with the in-group (Demoulin et al., 2004b), but there are mixed data on this effect (Demoulin, et al., 2004b; Gaunt, 2009; Paladino, et al., 2004;

Rohmann, Niedenthal, Brauer, Castano, & Leyens, 2009). A positive relationship between social identification and infrahumanization has been replicated in several studies, including Demoulin et al. (2004b) who found that the more people identify with their in-group, the more they infrahumanize an outgroup. However, a recent study by Gaunt (2009) found mixed results for the moderating effect of identification. In two studies of Israeli and Palestinian youth, identification did not interact with infrahumanization in Study 1. In Study 2, the association was partially present. The more participants identified with their Palestinian identity, the more they infrahumanized the Jewish out-group; but this did not occur among Israeli participants.

Interestingly, a study using German and French participants showed that varying the manipulation of identification affected observation of infrahumanization in the same inter-group context. In two studies with the inter-group context of German and French participants, Rohmann et al. (2009) found that in a low conflict context, the manipulation of identification varied the effect of infrahumanization. In Experiment 1, when identification was measured and not manipulated, infrahumanization was only found among high identifiers. However, in Experiment 2, when the identification was manipulated, the infrahumanization effect was evident for both low and high identifiers. The authors comment that the infrahumanization was, in this latter case, made possible by the introduction of an inter-group comparison in the identification manipulation. These results cast doubt on whether identification affects infrahumanization, as only primed or manipulated identification affected infrahumanization whereas non-manipulated identification did not have a relationship with infraumanizaiton. It suggests a lack of robustness of the infrahumanization effect, at elast as it is related to identification.

Another area in which the data are mixed is how identification affects the pattern of attribution of emotions to the out-group. In one study, not only did highly identified

participants grant more secondary emotions to the in-group than the out-group, but they were also more reluctant to grant secondary emotions to out-groups (Leyens, et al., 2001, Study 3). In another study, high identification predicted more attribution of secondary emotions to the in-group, but had no relationship with attribution to the out-group (Paladino, et al., 2004). It is therefore unclear if high identifiers are affording secondary emotions to the in-group or denying secondary emotions to the out-group or both.

These findings of Leyens et al. (2001) and Paladino et al. (2004) introduce another unresolved issue in the infrahumanization literature. There is debate in the literature on the process by which emotions are being granted and denied. There is mixed evidence of whether infrahumanization is in-group favouritism, out-group derogation, or both. These studies have conflicting results, with Leyens et al. indicating infrahumanization is both in-group favouritism and out-group derogation, as participants were affording secondary emotions to their in-group and denying them to the out-group. In the findings of Paladino et al., there is no out-group derogation by denial of secondary emotions, but rather only overattribution of emotions to the in-group indicating the process is in-group favouritism. This issue will be addressed more fully below.

Superordinate Identification. Another issue relevant to identification and infrahumanization is whether identification at the superordinate (shared) level will reduce infrahumanization. This is also an area that has revealed conflicting results. Gaunt (2009) found that the more that Arab and Jewish youth considered Arabs to be part of the superordinate Israeli category (with the assumption that Jews are already included), the less Jewish youth infrahumanized Arabs. Also, the more Arab Israeli youth considered themselves to be part of the superordinate Israeli identity, the less they

infrahumanized the Jewish Israeli out-group. This work suggests that shared identification in a superordinate category reduces infrahumanization.

However, another set of studies that manipulated national identity versus superordinate European identity in German and French participants found conflicting results. It was expected that there would be infrahumanization by those primed to have their national identity salient. In contrast, it was expected that there would be no infrahumanization for participants primed with the superordinate group identity. While there was an overall infrahumanization effect, this was not moderated by the type of identification made salient (Rohmann, et al., 2009). So, in summary, high identification with the in-group may increase infrahumanization and superordinate identification may decrease infrahumanization, but neither of these outcomes are found consistently. Therefore, identification is not a necessary condition, as both low and high identifiers can infrahumanize an out-group. Perhaps, instead, identification is a sufficient condition to cause infrahumanization, as studies show that manipulating identity can result in infrahumanization.

Status

One aspect of infrahumanization that has been replicated across several studies is the finding that infrahumanization is detected among both high and low status groups (Demoulin, et al., 2004b; Leyens, et al., 2001). Stated more generally, high or low status is neither a necessary nor a sufficient condition for infrahumanization to occur.

While most studies that have observed infrahumanization have used high status in-group and low status out-group contexts, several studies have tested low status in-groups and high status out-groups. In a Wason Selection Task (WST) design[5], it has

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[5] The Wason Selection Task (WST) is a test in which participants select cards showing certain pairings which are either informative or not informative for confirming a rule of which pairs belong together. Adapted for infrahumanization, participants were selecting from four types of cards which paired in-group or out-group with secondary emotions and in-group or out-group with primary emotions. In this way, if participants are motivated to reach the conclusion that the in-group has the human essence, in-

been found that dominated groups claimed more uniquely human emotions for themselves than dominant groups (Demoulin, et al., 2004b). Similar results have been found by Paladino et al. (2002) in an IAT design. In this latter study, the Belgian inter-group context was such that the somewhat lower status and certainly minority French-speaking group rated themselves as having more secondary emotions than the somewhat higher status and majority group of Flemish-speaking Belgians. The researchers found the same pattern of results as found in the Demoulin study (2004). The IAT found an implicit bias for associating the in-group with uniquely human secondary emotions and the out-group with non-uniquely human primary emotions, rather than the reverse pairings. The lower status French-speaking group, therefore, infrahumanized the higher status group exhibited by association of greater humanness with the in-group than the out-group.

Demoulin et al. (2004b) also varied group status across several studies and measured infrahumanization using explicit attribution tasks. They found that two low status groups (Canarians and Belgian Walloons) infrahumanized higher status out-groups (Mainsland Spanish and Belgian French, respectively). Gaunt (2009) also found that a low-status group (Arab Israelis) infrahumanized a high status group (Jewish Israelis). These findings suggest that reservation of humanness for the in-group is not unique to high status groups. I will return to this idea in a section on the in-group projection model in Chapter 4.

Conflict

Interestingly, one of the conditions that has been shown to be unnecessary for infrahumanization is conflict (Leyens, 2009). That is to say that infrahumanization occurs between groups that are not in direct conflict and does not interact with

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group-secondary cards are more informative than out-group-secondary emotion cards. Indeed, the out-group-secondary emotion cards would be least relevant.

perceived conflict in groups that do experience conflict (Demoulin, et al., 2004b; Gaunt, 2009). Demoulin et al. used group contexts including Belgian Flemish speakers and French speakers, as well as Americans (specifically from the east coast) and Mexicans.[6] There was infrahumanization between both of these groups that the authors argue are not in direct conflict with each other. Also, in a study of youth who do have a conflictual relationship with each other (Jewish-Israeli and non-Jewish Israeli), perceived conflict did not interact with infrahumanization (Gaunt, 2009). These studies show that conflict is not *necessary* for infrahumanization.

One study that suggests conflict may be *sufficient* to cause infrahumanization is by Castano and Giner-Sorolla (2006). They found that infrahumanization of an out-group increased from baseline after there had been inter-group killing of members of an out-group by the in-group. Though conflict was not a measured variable, we can conclude that knowledge of killing was knowledge of inter-group conflict, and therefore, infrahumanization increased with knowledge of past conflict. In summary, while conflict is believed to be non-necessary for infrahumanization, it may be a sufficient condition to trigger infrahumanization. However, this hypothesis is yet to be fully tested.

Violence

One study has evaluated violence as a moderator of infrahumanization (Delgado, et al., 2009). In this study, researchers found that exposure to photos of violence directed at humans triggers infrahumanization of an out-group even when that violence

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[6] Demoulin et al. (2004b) argue that the two intergroup contexts used in their study are not ones in which conflict exists. While I agree there is no explicit physical, violent conflict between these groups, I would argue that there are certainly social tensions, and some degree of political conflict. There is a lot of migration from Mexico into the US, resulting in many Americans feeling threatened economically and culturally (Hitlan, Carillo, Sarate, & Aikman, 2007; Lee, Ottati, & Hussain, 2001). Likewise, many Mexicans feel threatened by American cultural and economic influence in Mexico. Indeed, the authors did not measure perceived conflict so there is no way to know how much conflict the groups perceived in the intergroup relationship. In the Belgian French and Belgian Flemish context, "there is a long history of political and institutional conflicts" (Paladino, Leyens, Rodriguez, Rodriguez, Gaunt, & Demoulin, 2002, p.111. I suggest that with both intergroup contexts, it is likely that there was a degree of perceived social conflict.

is not related to the out-group or in-group specifically. In the same study, Delgado et al. and colleagues analyzed why the salience of violence (not directed at the out-group) was causing infrahumanization. Primary emotions were taken as a baseline as these are theoretically equally attributed to both in-group and out-group. Secondary emotions were taken as a deviation from the baseline. From this analysis, Delgado et al. saw that it was not the in-group that was humanized more, but rather the out-group that was granted lesser humanity. This suggests that the reason violence triggers infrahumanization is because violence changes the perception of the out-group (to which less secondary emotions are attributed) rather than the in-group (to which secondary emotion attribution remains stable as compared with baseline).

Ideology

Ideologies often inform approaches to intergroup interaction. It is often the case that these approaches "affect how minority group members are treated and, thus, the social climate that they encounter when they interact with members of the dominant group" (Vorauer & Sasaki, 2011, p. 309). Ideologies such as Right Wing Authoritarianism (RWA) (e.g. high levels of conventionalism, submission to conventional authorities, and aggressiveness toward conventional targets) have been shown to predict social attitudes such as racism (Van Hiel & Mervielde, 2005). In a similar way, several ideologies have been shown to predict infrahumanization, including conservatism, RWA, and sexism.

Work by DeLuca-McLean and Castano (2009) shows that conservatism is a moderating ideology of infrahumanization in the context of providing aid in the aftermath of a natural disaster. While their study did not detect a significant two-way interaction between an in-group and out-group and attribution of secondary emotions (infrahumanization), there was a three-way interaction that included degree of political conservatism. In the study, Caucasian participants were told about the effects of a hypothetical hurricane on either a Caucasian or a Hispanic family. Results showed that

conservatives attributed more secondary emotions to an in-group following a natural disaster than an out-group, following the infrahumanization emotion attribution pattern. Liberals attributed emotions equally between groups.

In addition, the suggested treatment strategies for coping in the aftermath of a natural disaster also suggested infrahumanization by conservatives. Conservative participants were more likely to suggest behavioural modification in the aftermath of a natural disaster rather than psychotherapy for a Hispanic (out-group) family than a Caucasian (in-group) family. Though it was not a direct measurement of infrahumanization, the authors reported that this second effect was indicative of infrahumanization. They claimed that conservatives were reserving the more exclusively human therapy (psychotherapy) for the in-group and selecting a treatment suitable for humans and animals (behaviour modification) for the out-group.

Another ideology, RWA, has also been identified as a moderator of the attribution of humanness (Motyl, Hart, & Pyszczynski, 2010). Motyl et al. used violence as a measure of infrahumanization by presenting violence as infrahuman (an instinctual and animal act) or humanized (involving abstract meanings and motivations). The authors hypothesized that participants would agree to in-group perpetration of violence if it was portrayed as human, but reject it if it was portrayed as animalistic or infrahumanized. In this way, participants would reject the in-group taking infrahuman actions. Participants assumed the role of commander-in-chief of the US Armed Forces and indicated their support for various military actions. They found that participants high in RWA rejected violence when it was presented as infrahuman but endorsed violence when it was humanized. For participants low in RWA, there was no difference in support for violence when it was described in the two conditions. The authors conclude that people high in RWA have a greater need to distinguish their in-groups from animal groups and that when violence is linked to animality, they are more likely

to reject violence than when it is humanized. Therefore, RWA is a moderating ideology of infrahumanization.

Research by Viki and Abrams (2003) pointed out that benevolent sexism and hostile sexism were mediators of infrahumanization. Hostile sexism is an ideology of antipathy towards women and their inferiority as a gender. Benevolent sexism is the belief in women as inferior or capable of only fulfilling restricted roles, but exhibited in subjectively positive or flattering ways (Abrams, Viki, Masser, & Bohner, 2003). Relating to infrahumanization, high hostile sexism predicted low attribution of positive secondary emotions (infrahumanization) to women whereas high benevolent sexism predicted high attribution of positive secondary emotions to women. Sex of the participant, however, did not have any effect on infrahumanization (Viki & Abrams, 2003). The first effect of participants high in hostile sexism suggests that hostile sexism predicts infrahumanization of women. The second effect for participants high in benevolent sexism may be explained by stereotyping women as more emotional than men. I will explore stereotyped emotions in Study 2 (Chapter 6) in this thesis. Taken together, from these three studies on the relationships of sexism, RWA and conservatism with infrahumanization, it is clear that several ideologies are related to people's views of the humanness of social groups.

Process

Research has addressed the question of the process by which infrahumanization occurs or whether infrahumanization is a process of in-group favouritism, out-group derogation, or both. To get a sense of how the patterns of each would look in infrahumanization by emotion attribution measures, it is necessary to assess the levels of attribution of primary and secondary emotions. In the case of infrahumanization, attribution of primary emotions can be taken to be a baseline as it is assumed to be the same between in-group and out-group. Therefore, it is the secondary emotions that vary

and express either in-group favouritism and out-group derogation. If primary emotions are equal between different groups, then, in-group favouritism is exhibited by over-attribution of secondary emotions to the in-group, and out-group derogation is under-attribution of secondary emotions to the out-group compared to the primary emotions baseline.[7]

So is infrahumanization either of these patterns of emotion attribution or both? Studies show that in-group favouritism and out-group derogation are two separate processes that do not necessarily happen in concert (Turner, 1978). Leyens et al. (2003) described infrahumanization as a combination of both in-group favouritism and out-group derogation. However, this statement was theoretical, and not based on empirical work. The empirical work is mixed. In their research, Gaunt et al. (2002) suggested that the infrahumanization process was in-group favouring, as data showed "increased attribution of secondary emotions to the in-group rather than decreased attribution of secondary emotions to the out-group" compared to primary emotions (p. 512). Another study by Demoulin et al. (2009b) found in-group favouritism without out-group derogation using groups based on colour preference and career choice. DeLuca (2009) observes that in attribution of humanity via secondary emotions expressed by group members, attribution patterns in some cases suggested a motivation to favour the in-group and in other cases more motivation to derogate the out-group.

Research by Demoulin et al. (2005) has begun to look in the area of motivation as part of the infrahumanization process in discerning in-group favouritism from out-group derogation. Using the WST, Demoulin et al. (2005) examined both high and low status groups, with and without conflict relationships in various countries. They conclude that there are two simultaneous motivations behind infrahumanization. One

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[7] Of course, this assumes that primary and secondary emotions are attributed to an equal degree. It is possible that all humans are viewed as possessing secondary emotions to a greater or lesser extent than primary emotions. That is, the average attribution level of secondary emotions, at baseline levels, may be greater or less than primary emotions. However this point has not yet entered the debate.

motivation is, first and foremost, in-group favoring. Groups were most motivated to select confirming information pairing in-groups with secondary emotions. The researchers also found that there was a second motivation of out-group derogation. Participants were least motivated to seek information pairing out-groups with secondary emotions.

Work by Gaunt et al. (2002) again investigated in-group favouritism and out-group derogation, specifically with the function of memory. They begin with the assumption that familiar conclusions are less memorable than unfamiliar conclusions. That is, when a piece of information is less consciously remembered, it is a sign of information being consistent with beliefs. The authors found that while people's memories associating in-groups with primary emotions and out-groups with primary emotions do not differ, people's memories associating in-groups with secondary emotions are less conscious than those associating out-groups with secondary emotions. They conclude that people perceiving in-group and secondary emotions pairings less consciously than out-group secondary emotion pairings is a sign that participants believed the in-group had more uniquely human emotions than the out-group. In this way, the in-group was being perceived as more human than the out-group. In using primary emotions as a baseline, the researchers found greater attribution to the in-group with secondary emotions rather than decreased attribution to the out-group of secondary emotions. Therefore, the process was in-group favouring and not out-group derogating.

Taken together, the above studies provide mixed evidence for whether infrahumanization is in-group favouring, or both in-group favouring and out-group derogating. It is clear that the process is at least in part in-group favouring. While two studies found the simultaneous presence of out-group derogation, one study did not. Several years after Leyens' first statement on the subject, given the above evidence,

Leyens et al. (2007) again made the claim than infrahumanization is both in-group favouring and out-group derogating.

While the debate is interesting, theoretically, I do not think that it is imperative to establish a single process pathway as indicative of infrahumanization. Rather, I think it is theoretically valid to say that seeing the in-group as more human than the out-group and seeing the out-group as less human that the in-group are both infrahumanization. In essence, denying an out-group humanness relative to the in-group and granting the in-group greater humanness than the out-group are both differentiating the in-group and out-group in humanness terms, in a way favouring of the in-group. Theoretically, both or either process can be classified as infrahumanization and it does not matter which or both are happening at any one time. Therefore, two additional infrahumanization patterns of emotion attribution would look like the following Figures 2.3 and 2.4. Figure 2.3 shows in-group favouritism, as the in-group is being attributed greater secondary emotions than the baseline primary emotions and out-group secondary emotions. Figure 2.4 shows out-group derogation, as the out-group is being attributed lesser secondary emotions compared to the baseline primary emotions and in-group secondary emotions.

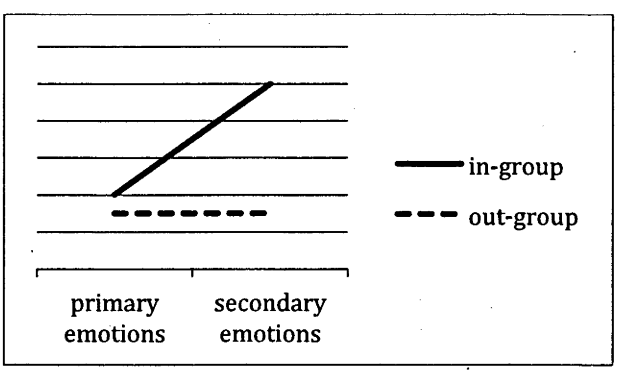

Figure 2.3. Hypothetical in-group favouritism pattern of infrahumanization.

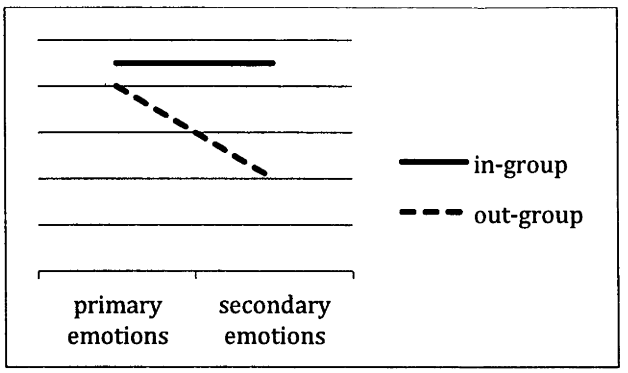

Figure 2.4. Hypothetical out-group derogation pattern of infrahumanization.

Consequences

As a process akin to dehumanization, researchers believed that infrahumanization is worthy of study because of the pathway that it opens towards mistreatment of the out-group and hypothesized that the consequences of not seeing an out-group as possessing equal humanness to the in-group might range from passive neglect to active harm. Several studies have looked at specific outcomes of infrahumanization (Castano & Giner-Sorolla, 2006; Cehajic, et al., 2009; DeLuca-McLean & Castano, 2009; DeLuca, 2009; Demoulin, et al., 2004b; Gaunt, Sindic, & Leyens, 2005; Goff, et al., 2008; Vaes, et al., 2002; Vaes, Paladino, & Leyens, 2006).

The above research has shown that, in general, people believe secondary emotions are experienced by the in-group. Vaes et al. (2002), therefore, theorized that expression of an emotion typical of the in-group would lead a perceiver to reason that the target is an in-group member. So, on the positive side of humanness attribution, a stranger (whose group membership is unknown) who expresses of secondary emotions is humanized, resulting in more helping and perspective taking of the stranger by the perceiver. By extension, a target's expression of secondary emotions should be interpreted by participants as similarity with targets, and should therefore elicit helping responses. Vaes et al. (2002) tested this with a "lost email" technique, similar to the lost-letter technique used by Milgrim (1977). Researchers found support in that participants who received an errant email from a person who expressed a secondary

emotion responded with more familiar or "nicer" responses than when the writer expressed a primary emotion. Another study found that people displayed more conformity to the ideas of political candidates from their own party who expressed secondary emotions, but not those of candidates from an opposing party expressing secondary emotions (Vaes, Paladino, & Magagnotti, 2011).

While in-group secondary emotions elicit positive responses, there has also been work done on the differences in reactions to in-group and out-group expression of secondary emotions. It has been found that, when an out-group member does, in fact, express a secondary emotion (an act which runs counter to the in-group's beliefs about the group), there are *negative* consequences for the out-group (Demoulin, et al., 2004b; Vaes, et al., 2003; Vaes, et al., 2006). In the work of Vaes et al. (2003), secondary emotions elicited more approach behaviours when expressed by the in-group and elicited avoidance behaviours when expressed by the out-group, whereas primary emotions had no difference. Work by Demoulin et al. (2004b) has also found that the expression of secondary emotions by the out-group elicits less positive reactions from an in-group such as decreased solidarity responses.

This result of negative responses to out-group secondary emotions has been further investigated by Vaes et al. (2006) to directly test if expression of secondary emotion by in-group and out-group members elicits different humanness representation by participants. Building on research on memory and stereotype activation, they hypothesized that secondary emotions would activate the human concept more when expressed by an in-group member than an out-group member. First, they reasoned that there is a positive association between humanity and secondary emotions and a positive association between in-groups and secondary emotion. At the same time, there is a negative association between out-groups and secondary emotions. Taken together, this means that there should be a positive association between a person's perception of an

in-group and humanity, but a negative association between a person's perception of an out-group and humanity. The results confirmed this hypothesis in two experiments, with both positive and negative emotions. Importantly, the researchers also showed that the results were not a factor of an overall positivity bias to a group that possesses secondary emotions. All representations in each of the conditions did not differ in positivity, but rather humanity activation in particular.

In a similar study with more dire consequences, DeLuca (2009) found that participants were more likely to support a military mission that would kill civilians but catch terrorists when those civilians were out-group members expressing secondary emotions versus out-group members expressing primary emotions or in-group members expressing either primary or secondary emotions. However, it is theoretically unclear as to why expression of emotions counter to beliefs have such a negative effect in the above two studies.

Unfortunately, work in the area has found that there are additional negative outcomes when secondary emotions are denied to the out-group. Such consequences are decreased helping behaviour and forgiveness for a group that is infrahumanized (Cuddy, et al., 2007b; Goff, et al., 2008; Wohl, et al., 2011) as well as decreased mental health aid for an out-group who may be in need of it (DeLuca-McLean & Castano, 2009). This finding is believed to be generalizable to overall decreased willingness to provide aid to an infrahumanized group.

In another study on forgiveness, Wohl, Hornsey, and Bennett (2011) found that after an apology, out-group forgiveness was only granted to the extent that a person perceives the capacity for the out-group to experience secondary emotions. When the out-group is not perceived to experience secondary emotions (that is, when it is infrahumanized), an apology including secondary emotions is seen as ingenuine.

There are situations, however, in which the experience of out-group secondary emotions cannot be denied. In highly emotional situations, when in-group members believe out-group members experience secondary emotions to some extent, the secondary emotions are believed by in-group members to be much shorter-lasting than those of the in-group (Gaunt, et al., 2005). It could, therefore, be predicted that a group member may perceive that any negative action taken towards an infrahumanized out-group would be less consequential, as its impact would only be short-term.

Another negative consequence of infrahumanization is that it can act as a justification for past violence. In three studies, Castano and Giner-Sorolla (2006) found that feelings of collective responsibility for the killing of an out-group member increased infrahumanization towards that out-group. The authors concluded that this cognitive strategy allows the in-group to excuse past wrongs and to manage collective guilt. The authors also hypothesize that it may allow the in-group to commit further wrongs against the out-group, such as withholding reparations for an offense. Using a different experimental design with a similar research question and hypothesis, Goff et al. (2008) have found evidence that infrahumanization of African American criminals by implicitly likening them with apes, is correlated with excusing police violence in custody and higher instance of death penalty in sentencing.

Conclusion

Emotions can be categorized into those that are common to both humans and animals (primary) and those that are unique to humans. Infrahumanization is the attribution of greater secondary emotions to the in-group than the out-group with relatively equal attribution of primary emotions between the two groups. It can be observed in both implicit and explicit measures. The field is yet to find the necessary and sufficient conditions that lead to infrahumanization, but several moderating variables have been identified. The consequences of infrahumanization are that it can

limit the acknowledgement of out-group suffering, decrease helping behaviour, decrease forgiveness of an outgroup, and justify past violence toward an out-group.

These very relevant and topical findings on the outcomes of infrahumanization make a strong case for the importance of infrahumanization research. Not only does infrahumanization affect the treatment towards an out-group, but, as Demoulin et al. (2009a) observe, it can have compounding effects for the series of actions and reactions between in-group and out-group. For example, two groups may each infrahumanize each other. This affects each group's analysis of the opposing group's actions, and results in inter-group misunderstandings. Each group will then react based on a misunderstood interpretation of the out-group's actions. The misunderstandings may then escalate from initial misperceptions to eventual hostility and antagonistic behaviour. For example, while perceiving the in-group experience of secondary emotion leads to empathy for the in-group, it is reasonable to predict that failure to recognize these emotions in out-group members will lead to a lack of demonstration of empathy (Cehajic, et al., 2009; Vaes, et al., 2003). The negative effects of the initial infrahumanization may then increase such that, when the out-group fails to receive empathy, they may develop a view of the in-group as cold and unfeeling, thus further straining inter-group relations. In this way, the present thesis understands infrahumanization as an inter-group process which can have cumulative and degenerating negative effects.

CHAPTER 3: FOUNDATIONS OF INTER-GROUP PROCESSES

In previous research on infrahumanization, infrahumanization is described as having certain similarities with the process outlined in Social Identity Theory (SIT), and puts the two on equal footing as theories (Demoulin, et al., 2004b). SIT is described as a "related" theory to infrahumanization, which is itself also described as a "theory" (Demoulin, et al., 2004b, p. 267). My approach to infrahumanization is different. I see infrahumanization resting on the concepts and assumptions of SIT, with SIT being a framework for understanding the concept of infrahumanization.

SIT began as a way to understand inter-group discrimination, of which infrahumanization is a type (for a review see S. A. Haslam, 2004). SIT develops the ideas around social identification and perceived inter-group interaction, concepts that are key to infrahumanization. The current chapter outlines key concepts of SIT as well as related theoretical perspectives of Self-Categorization Theory (SCT) and social identity threat, and how these theoretical perspectives frame the work on infrahumanization.

Social Identity Theory

A person's social identity is a component of a person's self-concept that is associated with one or more of his or her group memberships (Tajfel & Turner, 1979). SIT was developed out of initial experimentation with minimal groups, groups formed on such seemingly minor and meaningless conditions as to be expected to provide no basis for group-based discrimination. It was found, however, that even these minimal groups were sufficient to provoke in-group favouritism, or preferential allocation (of money and points) to in-group members relative to out-group members (Turner, 1982). In that sense, group members discriminated against an out-group without this discrimination being based upon personal interests, and without any prior relationship of antagonism between the two groups (Turner, 1982). Thus, the simple perception of

belonging to a group and identifying with it was sufficient for displaying some inter-group behaviour, specifically in-group favouritism (Turner, 1982). Initial, as well as subsequent, studies have found that "interpersonal attraction is not necessary for group formation and not sufficient to increase inter-group discrimination" (Turner, 1982, p. 24), however social identification with a group is sufficient.

From the social identity perspective, the social group is defined as two or more people who are linked by a *psychological* understanding of shared "social unity," (Turner, 1982, p. 15) without the need for formal institutional organization. Groups not only provide a way to classify the social world, but also a way to define the self in the social arena (Turner, 1982; Turner & Reynolds, 2001) as well as a means of gaining self-esteem (Tajfel & Turner, 1979; Turner, 1999). In that way, a positive group identity satisfies needs for positive social self-identity (as distinct from individual level self-esteem) on the condition that in-group is positively distinct from the relevant out-group (Turner, 1982).

Thus, positive social identities come from positive comparisons with relevant out-groups on relevant dimensions (Turner & Reynolds, 2001). For example, in an intra-hospital status context, a person with the social identity of doctor (a high status identity) may compare him or herself with the relevant out-group of nurses on the status dimension and establish a positive social identity. Infrahumanization can result when the relevant dimension being compared on is humanness.

Another element of SIT that is relevant to infrahumanization is that, in the event that negative as opposed to positive comparisons are made with relevant out-groups, the group members will desire to change groups psychologically, or try to change the group identity in imaginative ways (Turner & Reynolds, 2001). This process is called "social creativity." An example of this in infrahumanization terms would be low-status group members psychologically changing their group identity by attributing more humanness

to their own group through secondary emotions, a trait that is not dependent on status. The previous chapter described several examples of this. Demoulin et al. (2004b), for example, found that members of two low status groups (Canarians and Belgian Walloons) infrahumanized higher status out-groups (Mainsland Spanish and Belgian French, respectively). Gaunt (2009) also found that members of a low-status group (Arab Israelis) infrahumanized a high status group (Jewish Israelis).

It must also be observed that a social group is not always going to derogate a relevant out-group (Tajfel & Turner, 1979). Mere group categorization does not cause inter-group discrimination necessarily (Tajfel & Turner, 1979). Six aspects of the inter-group relationship that affect the likelihood of inter-group discrimination are: (1) the degree to which an individual identifies with a group, (2) the degree to which the in-group is compared with an out-group, (3) the degree of relevance of that out-group to the in-group, (4) the perceived status of the two groups, (5) the legitimacy of that status, and (6) permeability between group boundaries (Tajfel & Turner, 1979).

I will explain the above six aspects in greater detail here. Inter-group discrimination is, first, dependent on the degree to which an individual identifies with the group. This means that it is not sufficient for others to define the individual as a group member, but that he or she subjectively identifies with the in-group. Without internalizing the group as a part of the self, there is no reason for the individual to act based on group membership.

The next two points are that inter-group discrimination is dependent on the nature of comparison between an in-group and an out-group and this comparison is related to the degree of relevance of the out-group. A compared out-group becomes relevant through social context. Relevant comparison opens the door to potentially negative self-esteem if the comparison favours the out-group. In this case, there may be inter-group discrimination to try to reverse that negative in-group self esteem. Even if

the comparison favours the in-group, this positive comparison must be maintained for positive group-based self-estteem to be maintained. So if the positive comparison becomes threatened, inter-group discrimination may result (Tajfel & Turner, 1979).

Coming to the fourth and fifth points about status and legitimacy, the theory does not assume direct relationship between a variable, such as status, and inter-group discrimination, but rather a multi-faceted interplay (Tajfel & Turner, 1979). For example, in the case of unequal status, if the in-group is of higher status, this high status results in positive social self-esteem for the in-group through downward comparisons and in-group favouritism. However, the low status group does not necessarily accept their position as low-status, and have the opposite reaction to the high-status group, experiencing low group-based self-esteem and lacking a basis for inter-group discrimination.

For the low-status group, the theory distinguishes two possible avenues to regain positive group-based self-esteem. When status differences are perceived to be fair and legitimate, the lower status group may defer to the higher status out-group, at least on certain dimensions of comparison. In this case, group members may dis-identify with their low status group. But if the status differences are unfair or illegitimate, there will be social competition and/or social creativity (S. A. Haslam, 2004). Social competition is a process by which people directly try to change the relative status (e.g., a minority group working for civil rights) of their in-group. Social creativity includes comparison of groups on a different dimension in which the formerly low status group can be categorized as high status relative to the out-group. For example, this might involve an economically low-status minority migrant group comparing to the majority not on an economic dimension, but on a cultural dimension upon which it may compare more favourably.

The final aspect of the inter-group relationship that affects outcomes of inter-group discrimination is permeability. If the boundaries between the groups are permeable, that is, individuals can change groups, an individual may be likely use social mobility to attempt to re-align him or herself with a higher status group. For example, social mobility may involve a low-status minority migrant taking steps to become a citizen. (Of course, this may be met with resistance by the high-status group.) If the boundaries are impermeable and illegitimate, the low-status group as a whole will likely use social creativity or social change methods to change status differential to a more favourable in-group status (S. A. Haslam, 2004; Tajfel & Turner, 1979).

My approach to infrahumanization is informed by these six aspects of how inter-group dynamics affect inter-group discrimination and group based self-esteem. I do not expect that all groups, at all times, will infrahumanize an out-group, but rather that infrahumanization will be dependent on the complex nature of the inter-group relationship. For example, as outlined in the previous chapter, identification and essentialism have been proposed to be necessary conditions to elicit infrahumanization. There is an assumed positive relationship between infrahumanization and identification, and infrahumanization and essentialism. However, these seemingly simple relationships may be inherently complex in the same way that a factor such as status may differently affect inter-group discrimination based on factors such as permeability and legitimacy.

If we assume for the moment that infrahumanization is a similar process to in-group favouritism and/or out-group derogation, the two processes could be assumed to have similar parameters affecting their expression. We can then provide an example of how infrahumanization might be affected by complex inter-group relationships in a way similar to in-group favouritism described above. High identification, for example, may increase levels of expressed infrahumanization, but only to the extent that the

comparison group is *relevant* for comparison. Otherwise, even with heightened levels of social identification, infrahumanization levels may not change. Also, infrahumanization would depend on the content of the in-group identity. If the group's identity is characterized by tolerance or positive inter-group relations, then high identification would not predict high infrahumanization.

Similar to identification, essentialism might have a complex, rather than linear, relationship with infrahumanization. Essentialism has previously been proposed to have a unidirectional positive association with infrahumanization. However, essentialism is simply the belief that surface characteristics of a group (or individual) are determined by some inherent or essential quality. Logically, there is no reason why that inherent quality might be humanness. Inter-group comparisons are made on many dimensions and a high status group may, indeed, recognize the inherent humanness of a lower status group. It may even grant it superiority on this trait, and yet it may still be of higher status based on different qualities.

These examples may help to explain why there has yet to be evidence of direct causal relationships between status, conflict, or identification with infrahumanization. The inter-group relationships are sufficiently complex, that it would be oversimplifying to describe them as having one linear relationship.

Self-Categorization Theory

Self-Categorization Theory (SCT) was developed in part to explain the psychological process by which people can (and do) act as unique individuals and can (and do) act as group members (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). SCT outlines three broad demarcations of categorization: the superordinate human level, the social group level, and the personal or individual level. The theory states that when a psychological group is salient to an individual, and this group is relevant to the situation, the person will then identify as a member of that specific social group. This

process of self-categorization at the group level rather than the individual level is caused by a variety of individual and contextual factors, but is enhanced when the differences between members of the in-group (intra-group comparison) are seen to be less than the difference between members of the in-group and members of some relevant out-group (inter-group comparison) (Turner, et al., 1987).

When the person then identifies as a social group member, depersonalization occurs, which is stereotyping the self in terms of group traits (Turner, et al., 1987). In depersonalization, the process of categorization leads the perceived differences between individual members within a group (intra-group comparison) to be minimized and the differences between in-group and out-group members (inter-group comparison) to be maximized (Turner, 1999; Turner, et al., 1987; Turner, Oakes, Haslam, & McGarty, 1994). In-group members then become more willing to associate prototypical, or broadly representative, in-group characteristics and attitudes with the self. To the degree to which this takes place, the person perceives the self as psychologically interchangeable with other group members (Turner, et al., 1987; Turner & Reynolds, 2001).

The individual, now perceiving the self and others as group members, perceives the self and others as having traits of group members (Turner, et al., 1987). These traits, or category characteristics, come from category exemplars. These exemplars include fellow group members, who are prototypically representative of the group and who may include the self (Branscombe, Ellemers, Spears, & Doosje, 1999). Shared characteristics include not only traits, but also needs, goals, and attributes (Turner, 1999). Because depersonalized group members are assumed to share views, the group member perceives that his or her individual views are views shared by other group members (Turner, et al., 1987).

This becomes relevant in the assessment of infrahumanization. Infrahumanization researchers often ask how "people" (meaning other members of the in-group) typically perceive the out-group, as opposed to asking how the person individually perceives the out-group. If the individual is perceiving the self as a group member with attitudes and views of a group member, the infrahumanization researcher can assume that the views of "the group" are also views of the individual.

In a similar vein, it is observed that infrahumanization is less likely to occur when an out-group member is individuated (N. Haslam, Loughnan, Kashima, & Bain, 2008c). It is only when out-group members are being perceived as group members and not as individuals that they are infrahumanized. This relates to the principles of SCT in that, when categorization is taking place at the group level rather than the individual level, out-group members (as well as in-group members) are depersonalized and perceived as interchangeable with each other. In this way, out-group members are perceived as a homogenous group (Turner, 1982). It is at this group level of categorization when out-group members are depersonalized that their uniquely human emotional experience (the variable relevant to infrahumanization) can be generalized because the emotions of one can be assumed to reflect the emotions of all.

In this way, infrahumanization is assumed to occur at the social group level rather than at the individual level or the superordinate level (for the groups that are included in the superordinate identity). Therefore, if a social group is recategorized on a higher (i.e. superordinate) level, either one inclusive of the particular in-group and out-group, or inclusive of all groups at the human level, inter-group discrimination such as infrahumanization should decrease (Gaunt, 2009). This is because the former out-group members become psychological in-group members and the newly formed set of group members are now believed to share a new set of traits, emotions, beliefs and values that are characteristic of the prototypical superordinate group member. Because social

groups are often a source of positive self-esteem, these traits, emotions, beliefs, and values of the newly formed superordinate group are likely to be as subjectively positive as those of the former in-group. As uniquely human traits, emotions, beliefs and values are subjectively positive in the view of human groups, the characteristics of the superordinate group are likely to be those that are characteristically "human."

Similarly, changing the comparative context of the in-group and out-group from the social group level to the individual level will decrease the degree of assumed prototypicality of in-group and out-group members. As described above, recategorization of the group member as an individual (decategorization) would result in less assumed prototypicality and less knowledge of characteristics as individuals than there would be as group members. That would result in less ability to infer individual-level characteristics, such as the secondary emotions of the individual. Therefore, there should also be less infrahumanization at the individual level of categorization than at the group level. This has, in fact, been observed by N. Haslam et al. (2008c)

Moreover, members of an out-group that was infrahumanized in one context are not necessarily likely to be infrahumanized in a different comparative context. Each inter-group categorization results in a unique comparative context with different relevant inter-group characteristics. Categorization of the same group members in one domain may involve different salient and relevant characteristics from the same group in another domain. For example, in a nationality categorization of Australians and New Zealanders, the salient and relevant characteristics of out-group members may not involve lesser humanity. In a nationality context, the two countries have a relatively positive and cooperative relationship and share the commonality of being members of the British Commonwealth. However, change the categorization to international rugby and in this new comparative context the groups Australians and New Zealanders (containing the same members) suddenly have a conflictual relationship. Depending on

the nature of the inter-group relationship, humanity may become a salient and relevant characteristic. (The specific inter-group characteristics that would lead to this are unclear, as are the necessary and sufficient conditions required to elicit infrahumanization.) If so, an Australian rugby fan in-group may infrahumanize a New Zealand fan out-group and vice versa.

The idea in SCT that social groups are evaluated within a frame of reference of a higher level of inclusiveness can be taken one step further (Turner, et al., 1987). The above example of Australia and New Zealand only included two social groups, compared under one superordinate identity of either nationality or international rugby. So each group had a single frame of reference for comparison with the other. Inclusiveness also varies with the frame of reference when more than two groups are concerned.

At the inter-group level, in the process of depersonalization, group members see intragroup similarties between some examplar or prototypical group member and other group members. This prototype may not actually be embodied, but rather is the ideal of what it means to be a member of that group. This idea of single individual exemplars of a social group also applies to inter-group comparisons within a single superordinate identity. So a single group may be considered prototypical of the superordinate group. However, each group may have a different idea of the characteristics prototypical of the superordinate group. Therefore, different groups may have different ideas of which group is prototypical of the superordinate group. That is, the characteristics of prototypicality may not be consensual between groups. Groups are likely to each project their own in-group characteristics on the superordinate identity, a concept that will be explained further in Chapter 4 (Wenzel, 2003).

For example, imagine that groups A, B, and C belong to superordinate category X. From the viewpoint of group A, group C may be most prototypical, or highly

representative of what it means to be an X group. But from the viewpoint of group B, group C may be less representative of X compared to B itself. So if we have X category of international rugby teams, and teams A) Australia, B) New Zealand, and C) South Africa, Australians may see South Africa as prototypical, but New Zealand may see themselves as more prototypical than South Africa.

These subjective evaluations not only vary between groups but between situations. Therefore, it is group C's (South Africa's) relative superordinate group representativeness at a particular time that determines its belongingness to the superordinate group. For example, the year they win the world cup, they may appear to their own group and others as more a more prototypical rugby team than the previous year.

In the case of infrahumanization, the superordinate group is humans and the degree of infrahumanization is determined not by a group's prototipicality based on some objective conception of humanness, but rather the relative prototypicality in any one inter-group context. A group may seem more human when leading an international humanitarian aid organization than when leading a coalition of allies in war. So, in summary, comparative context, based on self-categorization principles, will affect infrahumanization in that a group may be differentially granted humanness based on different inter-group categorizations.

Social Identity Threat

Social Identity Theory (SIT) is inclusive of the idea of social identity threat which is relevant to the study of infrahumanization. Social identity threat is psychological distress experienced when negative evaluations of one's social group gives way to negative feelings about the self based on group membership (Aronson & McGlone, 2009; Branscombe, et al., 1999). Self-categorization theory (SCT) explains that when social identity is salient and the self is depersonalised, self-esteem is garnered

from the social rather than personal identity (Ellemers, Spears, & Doosje, 2002; Tajfel & Turner, 1979). As SIT states, positive in-group evaluation, and therefore positive social identity, comes from favourable comparisons with the out-group (Aronson & McGlone, 2009; Shelton, Richeson, & Vorauer, 2006). Sometimes, the identity of the group is not positive, and favourable inter-group comparisons are not possible, and then the identity poses a threat to group-based self-esteem.

This threat can be caused in many ways, including negative stereotypes of the in-group, direct competition by the out-group, poor performance by the in-group, lack of distinctiveness between comparison groups, and/or exclusion from a valued group (Aronson & McGlone, 2009). Social processes that are outcomes of social identity threat for threatened group members are varied, but those most relevant to infrahumanization are in-group favouritism and out-group derogation (Aronson & McGlone, 2009; Shelton, et al., 2006). That is, when the group member feels threatened by having a negative social-identity, he or she may react with in-group favouritism or out-group derogation.

In research on infrahumanization, participants who are part of a common social group are presented with the a relevant inter-group context and a relevant out-group that is to be evaluated. In this way, there is an implicit comparison being made between the in-group and out-group. As described above, it is possible that, in this comparison, the identity of the group member may be threatened in various ways (e.g. stereotypes, competition, poor performance, lack of distinctiveness, and exclusion). He or she may then react with infrahumanization, thereby changing the comparative context to humanness, and granting greater humanness to the in-group than the out-group. (Whether this is through in-group favouritism or out-group derogation is not important.) This means that the comparison being made in infrahumanization research (greater humanness for the in-group) can be used as a response to out-group threat, as it will

reaffirm the favourable comparison of the in-group over the out-group. It is a change of, or a selection of, comparison context that will be favourable. For this reason, the study of social identity threat becomes relevant to the present work on infrahumanization

The literature outlines several types of social identity threat: categorization threat, distinctiveness threat, acceptance threat, threats to relative status, and value threats. Each type's relevance to infrahumanization and potentially affected groups varies, and will be described further below.

Categorization threat is that of being placed in a social category with which one is not comfortable (Branscombe, et al., 1999; Shelton, et al., 2006). This is most relevant for low identifiers who are likely to react with disidentification with the group and identification with the personal self-identity which would not include infrahumanization.

Distinctiveness threat is when the distinctiveness of the group in comparison with other relevant out-groups is called into question (Ellemers, et al., 2002; Nadler, Harpaz-Gorodeisky, & Ben-David, 2009). This type of threat is relevant to both low and high identifiers who will react in different ways. Low identifiers will choose to shift their self-definition to a different identity, possibly the superordinate group (Ellemers, et al., 2002; Nadler, et al., 2009), in order to re-establish positive group level self-esteem. High identifiers will react with out-group derogation and increased self-stereotyping and, therefore, may engage in infrahumanization as a means of re-establishing positive group-level self-esteem (Nadler, et al., 2009). The difference in reaction by low and high identifiers is due to differing levels of commitment to the in-group.

Acceptance threat is when an individual's place within the group is made insecure (S. A. Haslam, 2004; Tajfel & Turner, 1979). In this case, low identifiers are

not likely to experience threat, but high identifiers may react with out-group derogation to prove loyalty to the group (S. A. Haslam, 2004), and this may include infrahumanization.

Threats to relative status challenge the existing position of one group relative to another based on competence, knowledge, or resources (Branscombe, et al., 1999). In this case, those who identify with the group may try to reaffirm superiority to the out-group in a new domain, which may include humanness.

Finally there can be threats to the value of social identity, particularly the group's competence and morality (Branscombe, et al., 1999; Ellemers, et al., 2002). In this case, low identifying group members will react by emphasizing the heterogeneity of the group or with disidentification with the in-group (Ellemers, et al., 2002). This is because, while those with low identification may feel personally threatened by criticism of the group, they may not be sufficiently committed to desire defending the group. For those who remain high identifiers, superiority on humanness may counteract threats to both competence and morality as humans are seen as more intellectually competent and moral than animals, so infrahumanization may occur.

In summary, the types of social identity threat most relevant to the study of infrahumanization are distinctiveness threat, acceptance threat, value threats, and relative status particularly for high identifiers. In planning the inter-group context of Study 1 and trying to create an inter-group context in which I would observe infrahumanization, I tried to create threats to the relative status for the in-group. I also tried to create distinctiveness threat in Study 1 by saying that the out-group was causing changes to the nature of the out-group. I will explain this more in Chapter 6.

To conclude, the present work will approach infrahumanization from an SIT framework, inclusive of SCT. Accordingly, the infrahumanization process deals with groups in which individuals are self-categorized in terms of a social identity rather than

personal identities. Through social identity threat, the group members of one group come to discriminate against an out-group by a combination of in-group favouritism and out-group derogation. The specific domain in which the groups are compared is humanness. Under certain circumstances, with categorization made under certain inter-group contexts, group members may come to see members of the out-group as posessing less uniquely human traits and emotions than their own group. It is then that there are negative inter-group outcomes.

Chapter 4: Related Topics

Introduction

Infrahumanization shares characteristics with, but is distinct from, other processes in the social-psychology literature. The first part of this chapter identifies and describes similar processes, paying special attention to necessary and sufficient conditions for their expression. I will analyse five similar processes to make predictions for which types of variables should be tested in work on teasing out the necessary and sufficient conditions for infrahumanization to occur. This is the focus of Studies 1-5 of the thesis. Part 2 of the chapter addresses the research on types of humanness in more detail, and describes how two distinct types of humanness relate to the research on infrahumanization

Related Research

Moral Exclusion, Dehumanization and Delegitimization

Infrahumanization, and its similar processes delegitimization and dehumanization, can be classified as types of moral exclusion. Moral exclusion is when individuals or groups are no longer considered to deserve moral treatment (Opotow, 1990). First, I will describe delegitimization and dehumanization in more detail, and then I will describe the overarching concept of moral exclusion.

Delegitimization. Delegitimization is defined as "categorization of a group or groups into extremely negative social categories that are excluded from the realm of acceptable norms and/or values" (Bar-Tal, 1990, p. 65). Similar to infrahumanization, it is the denial of a group's humanity, and allows for moral exclusion (Bar-Tal, 1989). However, delegitimization is described as an inter-group relationship that is more extreme than that described by infrahumanization, usually appearing in cases of intractable conflict (Oren & Bar-Tal, 2007). It is the complete rejection of an out-group from the society of the in-group (Opotow, 1990; Oren & Bar-Tal, 2007). Like

infrahumanization, it can be the cause of harm to the out-group and then, afterwards, the justification for harm (Bar-Tal, 1990).

One contextual factor responsible for precipitating delegitimization is that the delegitimized out-group's perceived nature, qualities, or goals are ones that threaten the well-being of the delegitimizing group (Bar-Tal, 1989, 1990). In particular, when there is the perception that the goals of the out-group are irrational, hazardous, and zero-sum in relation to the in-group, delegitimization can frame the relationship. It is important to note that it does not matter if the goals are actually contradictory and zero-sum; what matters is that they are perceived that way (Bar-Tal, 1990). The type of relevant threat can be material, such as threatening the economy of the in-group, or symbolic, such as threat to the culture, religion, or values of the in-group (Bar-Tal, 1990). I will study each of these types of threat in Study 1. Bar-Tal (1990) also observes that delegitimization can occur in the absence of conflict between groups. This point is important for drawing a parallel with infrahumanization, which is also (sometimes) observed outside of conditions of conflict. Finally, another contextual factor that affects delegitimization is the presence of minimal social contact between the members of the two groups (Oren & Bar-Tal, 2007).

Dehumanization. Dehumanization is theoretically ambiguous in its distinctiveness from infrahumanization. There is no clear delineation between the two, nor consistency in the way the terms are used. Therefore, while work on dehumanization can potentially inform work on infrahumanization, it is important to first engage with the literature on their similarities and differences.

According to one definition, while dehumanization is viewing the out-group as completely non-human, infrahumanization is a "milder form of dehumanization that happens in everyday situations" (Demoulin, et al., 2009a, p. 154; Leyens, et al., 2007). At the same time, the two are sometimes used interchangeably (DeLuca-McLean &

Castano, 2009; Marcu, et al., 2007). But if infrahumanization is described as a less severe form of dehumanization, as if the two are parts of a continuum of humanness, the question remains, what are the limits which separate dehumanization from infrahumanization?

One answer to that question comes from a study using implicit measures by Boccato, Capoza, and Falvo (2008). Infrahumanization was classified as faster identification of human faces preceded by in-group than out-group names and dehumanization as faster identification of ape faces preceded by out-group than in-group names. In that way, infrahumanization is the greater likening of the in-group with humans and dehumanization is the greater likening the out-group with animals. However, a similar differentiation is used in the debate of whether infrahumanization is in-group favouring or out-group derogating. Likening the in-group to humans was labeled by Gaunt et al. (2002) as in-group favouritism, and likening the out-group to animals was labeled as out-group derogation. Therefore, this theoretical distinction between infrahumanization and dehumanization is confounded with the definitions of in-group favouritism out-group derogation in the literature. There seems to be no clear definitions at this point.

If dehumanization and infrahumanization are two points along a continuous scale of humanness attribution, then it is likely that the mediators, consequences, and precipitating factors for one are similar to the other. In this manner, knowing the precipitating factors of dehumanization is likely shed light on those of infrahumanization. For that reason I, now, turn to research on the antecedents of dehumanization to look for probable similarities with conditions that induce infrahumanization.

Several variables, including the individual difference measure of hawkishness, as well as socioeconomic status have been found to have positive relationships with

dehumanization (Maoz & Clark, 2008). Looking at another individual difference measure, Hodson and Costello (2007) found that dehumanization was predicted by heightened disgust sensitivity, and that this effect was mediated by individual differences in Social Dominance Orientation (SDO). In a related finding, out-groups stereotyped to be low on warmth and competence (which produces disgust and contempt) tend to be dehumanized groups (Harris & Fiske, 2006). Finally, Esses et al. (2008) studied members of the public's perceptions of refugees, using perceived immorality, barbarian image, and low justice values, as measures of dehumanization. From this study the authors concluded that, to the extent an out-group is perceived as immoral, it is likely to be dehumanized. I examined morality of the out-group as an independent variable in Study 4 and Study 7.

Moral exclusion. Moral exclusion is a term developed by Opotow (1990) that is said to occur "when individuals or groups are perceived as outside the boundary in which moral values, rules, and considerations of fairness apply. Those who are morally excluded are perceived as nonentities, expendable or undeserving" (p. 1). As a result, harming or discriminating against morally excluded groups is seen as "appropriate, acceptable, or just" (Opotow, 1990, p. 1) because they are either unfeeling or unworthy.

It is important to note that Opotow (1990) does point out that the consequences of moral exclusion can vary in their severity. The result can be active violence and discrimination, or more passive neglect when we see groups undergoing physical or emotional hardship and we fail to respond in a way that acknowledges them as moral beings. This passive form of moral exclusion is the one under which infrahumanization can be categorized.

Moral exclusion occurs when an out-group is not included in a group's moral community, or the psychological boundaries that determine to which beings justice is extended. While it has been emphasized previously that out-groups are attributed with

different characteristics to the in-group, most groups can still be categorized under some superordinate level identity. For most groups, one of the most inclusive superordinate levels of identification is the moral community. Groups have existing norms for the composition of the moral community (e.g. the extent to which nonhuman animals or criminals are included). So the boundaries of the moral community are partially determined by social norms of superordinate group identification.

In studying the antecedents of moral exclusion, Opotow (1995) found that there are several qualities of the inter-group relationship that are influential. In her research, both utility (or the extent to which the out-group is beneficial to the in-group) and conflict had a relationship with moral exclusion. Conflict had a positive relationship with moral exclusion, with escalated conflicts causing more exclusion. Utility had a negative relationship with more useful groups being less morally excluded. The degree of similarity between the in-group and the out-group does not appear to predict moral exclusion (Opotow, 1995). Although this latter finding may seem surprising, as similarity might imply shared norms and values and less inter-group discrimination, similarity could also lead to threatening relationships (Ellemers, et al., 2002; Nadler, et al., 2009). As previous research on social identity threat showed, groups value positive distinctiveness and when distinctiveness is threatened, non–distinct groups may react with negative inter-group behaviours.

There are also a number of normal psychological processes that can, at their worst, contribute to the moral exclusion of an out-group. For example, exclusion would not be possible without social categorization, the division into social group categories to which meaning is attached and that can serve to justify structural inequalities. Another psychological process that can be influential is "just world thinking" which allows us to be aware of inhumane conditions of other groups but not take action against it; this is another example of moral exclusion in a passive sense (Opotow, 2001b).

Finally, Opotow discusses "unconnectedness" with an out-group, or distance in the psychological proximity of two groups as affecting moral exclusion. Those who are psychologically closer to us are assumed to deserve more moral considerations than those who are distant from us (Opotow, 2001b). Distance can be created by a breakdown in community or through zero-sum conflicts, particularly over resources (Opotow, 2005). To relate this research back to infrahumanization, denial of humanness denies moral deservingness. In this way, infrahumanization is a type of moral exclusion, and thus the antecedents of moral exclusion may predict infrahumanization. Of these antecedents of moral exclusion, I will study social categorization, in the sense of identification with the in-group in Studies 2-5, and degree of conflict (in the form of competition) in Study 5.

In-group Bias

Infrahumanization has been described as a type of in-group bias (Gaunt, et al., 2002). To clarify, in-group bias is being used here as a general term for attitudes and behaviours which show partiality to an in-group over an out-group, not for merit, but for no other reason than group affiliation. Indeed, infrahumanization is attributing more of a valued quality (secondary emotions) to an in-group than an out-group. In this way, variables affecting in-group bias are relevant to the study of infahumanization.

Hewstone, Rubin and Willis (2002) provide a review of variables that affect in-group bias. Identification with the in-group has a positive relationship with in-group bias and has already been found to influence infrahumanization. For this reason, Studies 2-5 will measure identification. Also, as has been found with infrahumanization, both high and low status groups display in-group bias (Hewstone, et al., 2002). While low status groups may concede the high status group's superiority on certain traits, low status groups will favour the in-group more on status-unrelated measures (Reichl, 1997). High status groups also differentiate between status related

and unrelated measures and display less in-group bias when attributing status unrelated traits (Reichl, 1997). Still, high-status groups express greater in-group bias overall (Bettencourt, Dorr, Charlton, & Hume, 2001). As already addressed in the previous chapter, threat, particularly distinctiveness threat, has also been found to affect inter-group bias, particularly for groups that are not extremely similar or extremely distinct from the in-group (Hewstone, et al., 2002). In-group bias can serve an identity function in maintaining positive distinctiveness between the groups (Ellemers, et al., 2002; Nadler, et al., 2009). Therefore, we can hypothesize that identity threat would lead to infrahumanization. Identity threat is an independent variable in Study 1.

In-Group Projection

The In-Group Projection Model (IPM) describes effects of in-group and out-group identification with the superordinate group and makes predictions about inter-group responses to re-categorization and categorization at a superordinate level. As the following section will describe, in-group projection can be argued to be very similar to infrahumanization. In fact, the in-group projection model has been found to be able to predict infrahumanization patterns (Paladino & Vaes, 2009).

According to the IPM, the meanings of superordinate categories provide a basis of comparison for lower level categories (Wenzel, Mummendey, Weber, & Waldzus, 2003). Groups perceive their own group to be more similar to, or representative of, the superordinate group. That is, they construct the meaning of the superordinate group by projecting in-group characteristics onto the superordinate group. Therefore, the out-group's characteristics are excluded from the meaning of the superordinate group by the nature of the construction of the superordinate group characteristics. The more the in-group traits are projected onto the superordinate category (and, therefore, the more the in-group is representative of the superordinate category), the less is the potential for the out-group to be identified with the superordinate category. This process is particularly

prevalent for highly identified group members and when the superordinate category is valued (Paladino & Vaes, 2009).

In this research on infrahumanization, we can assume that, for many inter-group contexts, humanness is a valued superordinate category. Therefore, if the human superordinate category is salient, in-group projection would involve the in-group projecting its own characteristics on the superordinate group "human." If the in-group were to then to show in-group favouritism (attribution of more valued traits to the in-group), they would be infrahumanizing the out-group, because they would attribute the human characteristics (now in-group traits) to the in-group more than the out-group.

The IPM predicts that attribution of high superordinate group characteristics to both the in-group and out-group is not likely to occur simultaneously unless the groups are quite similar. It also predicts that when humanness is the superordinate category, high attribution of in-group characteristics to the superordinate group would exacerbate infrahumanization. This is because having in-group characterize the superordinate identity precludes attribution of superordinate group traits to the out-group. At the same time, attribution of high superordinate traits to the out-group (if this were to occur) would have the opposite effect, reducing infrahumanization.

The theoretical predictions of the IPM were supported in a study by Gaunt (2009) on infrahumanization. The two processes, therefore, appear similar. Gaunt tested the moderating role of superordinate categorization on infrahumanization of an out-group. Data showed that participants who identified the out-group with the superordinate identity did not exhibit infrahumanization. From an IPM perspective this would be because characterizing the out-group as representative of the superordinate category means that the superordinate identity (humanness) is not made up of characteristics exclusive to the in-group.

Paladino and Vaes (2009) also observed that the IPM may underlie infrahumanization. They tested the directionality of ascribing traits to the in-group, out-group, and superordinate category. Most infrahumanization work uses emotions and traits that (according to experimental data) are perceived to be part of humanness, and observe the attribution of these traits to in-group and out-group. That is, traits and emotions are attributed to the in-group and out-group based on their humanity. Paladino and Vaes (2009) find a reverse pattern, in line with the IPM, that traits and emotions may be characterized as human because they are thought of as in-group traits. They conclude that traits and emotions should not be seen to have a set humanness quotient, but rather that the humanness of a trait is dependent on the perceiver's perspective and membership. It follows then, that belongingness to the human category is dependent on sub-group membership as well as possession of humanness traits and emotions.

The work of Paladino and Vaes (2009) and Gaunt (2009) suggests that the process of in-group projection may be the process that underlies infrahumanization. Still, more work needs to be done to assess whether moderators of each (e.g., identification with the superordinate category and perceived complexity of the superordinate category for the IPM) are consistent with each other in order to fully determine whether the IPM is a suitable model for infrahumanization. Such work is beyond the scope of this thesis.

Two Senses of Humanness

Human Nature and Human Uniqueness

At this point, it is necessary to review work that has run parallel to that of infrahumanization that analyses the make-up of humanness. In initial studies of infrahumanization, no distinction was made between human uniqueness and human nature; rather, the terms were used interchangeably (Paladino, et al., 2002). More

recently, researchers outside of the area of infrahumanization have studied conceptions of humanness itself and this work has distinguished between two types of humanness. They have found that in the lay understanding humanness has two distinct aspects, human nature (HN), and human uniqueness (HU) (N. Haslam, Bain, Douge, Lee, & Bastian, 2005; Loughnan & Haslam, 2007). Simply put, human uniqueness traits are those that separate humans from animals, while human nature traits are those that separate humans from automata (Loughnan & Haslam, 2007). By this definition, infrahumanization research has, so far, concentrated on human uniqueness qualities, specifically, secondary emotions that distinguish humans from animals. HU can also include higher cognition, sophisticated language, and morality. HN includes those attributes that involve warmth, flexibility and animation (Loughnan & Haslam, 2007).

Haslam (2006) has argued for the separateness of these two dimensions of humanness and their distinctness as two individual continua. In fact, the two senses of humanness have been found to be uncorrelated among research participants' ascriptions to out-groups (N. Haslam, et al., 2005). Therefore, while infrahumanization measures the ascription of HU, it is also necessary to observe attribution of HN to fully understand the way the humanity of the out-group is being perceived. Both HN and HU are analyzed in Studies 5 and 7.

One paper in the infrahumanization literature to date addresses how the work of Haslam et al. and Loughnan et al. on the HN and HU distinction is related to infrahumanization (Leyens, et al., 2007). In this article, the authors express agreement with the concept of there being two domains of humanness: what separates us from animals (HU), and what separates us from automata (HN) (Leyens, et al., 2007). However, there is a difference in the way Haslam et al. (2005) and Leyens et al. (2007) discuss these two dimensions that is relevant to the distinction of infrahumanization from dehumanisation. Haslam, Loughnan, Kashima and Bain (2008c) refer to denial of

HU and HN as animalistic dehumanisation and mechanistic dehumanization, respectively, and not as infrahumanization. Leyens et al. (2007) refer to HU trait denial as infrahumanization and the HN trait denial as dehumanisation, using the differences in the content of the concepts as a means of distinguishing infrahumanization from dehumanization. For this thesis, I will adhere to the precedent set by Leyens et al. and describe denial of HU as anamalistic infrahumanization and denial of HN as mechanistic dehumanization.

Research has shown that the two distinct categories of humanness are attributed differently to different social categories (Bain, Park, Kwok, & Haslam, 2009; Loughnan & Haslam, 2007). This has been observed in both implicit associations and explicit ratings. Importantly, work by Loughnan and Haslam (2007) shows that non-derogated groups can be denied either HU or HN, but not necessarily both types of humanness. For example, business people were denied HN and artists were denied HU, but each was granted the other form of humanness. Therefore, HU and HN can be denied selectively. I will return to this idea in Chapter 10.

The above study also further supports the idea that denial of humanness can exist outside of conflict or persecution. Artists and businesspeople enjoy relatively non-conflictual relationships with the broader society. In general, they are not stigmatized groups. Yet both are subtly dehumanized. Therefore, attribution of lesser humanness to these groups, in particular, emphasizes how subtle forms of infrahumanization and dehumanization can be part of everyday inter-group processes.

As another demonstration of denial of humanness in everyday life, Bain, Park, Kwok, and Haslam (2009) show that the different forms of humanness can be attributed and denied in a complementary pattern. They found that Australians differentiated themselves from Chinese using HN traits and Chinese differentiated themselves from Australians using HU traits. Importantly for our work, Bain et al. (2009) found that

Australians did not differentiate their group from Chinese based on HU traits. However, this does not mean that they were not differentiating the humanness of these two groups. In both explicit and implicit measures, Australians rated their own group as higher on HN traits than the Chinese. That is, Australians were seen as more feeling and "only human" compared to the Chinese who they perceive as more stoic and less emotive. Therefore participants could recognize the stereotypical strengths of one group on HU traits but reserved the other type of humanness (HN) for their own group. A similar but reversed pattern of results was found for the Chinese participant group who granted HN to Australians, but reserved HU for their own group.

Bain et al. (2009) hypothesized that there is a difference in the type of humanness that is relevant to a group based the nature of the comparison group. For most European groups, for example, their nation's history is one of cultivation of culture and colonial rule of lesser "developed" nations. These nations should, therefore, value HU most, as HU traits include ones such as civility, refinement, rationality and maturity. Indeed, these countries are where most of the infrahumanization research (which measures HU) has been carried out. Without this same history, the authors hypothesize that Australians may be more inclined to see HN as a more important point of pride than HU as HN is more a part of their national narrative, including traits like warmth, individuality, and openness Therefore, they hypothesize that research will more often find denial of HN and not HU with Australian samples. A second paper by Bain et al. (2010) furthers this argument, describing in-group stereotype content as a determinant of HU/HN attribution.

Bain et al. (2009) point out that denial of the two different forms of humanness might yield different effects on inter-group relations. Denial of HN may make members try to create or maintain social distance, either personally or at a national level. Denial of HU may lead to not taking an out-group seriously and, therefore, seeing it as

undeserving of respect or acknowledgement of autonomy. At the same time, the authors also point out that because the two forms of humanness can be complimentary, attribution of one may make up for the negative consequences of denial of the other (Bain, et al., 2009).

Distinctions between the two types of humanness and research demonstrating the differential attribution of HU and HN to the same group is important for the present research. Studies 1-4, only measured secondary emotions, which separate humans from animals, much like HU traits. However, human nature traits were not measured. Based on the findings of Studies 1-4, Studies 5 and 7 measured human uniqueness and human nature traits. I assess the complimentary attribution pattern and its background in Chapter 10, Study 7.

Conclusion

This chapter brings together research on several concepts related to infrahumanization that can inform the research in this thesis as it moves forward. In particular, variables that affect moral exclusion, delegitimization, dehumanization, in-group favouritism, and in-group projection will inform the design of Studies 1-5. Also, the conception of two distinct types of humanness, HN and HU, provides a more nuanced definition of humanness to that described in infrahumanization research. The humanness research of N. Haslam et al. also provides two additional measures to those used in previous infrahumanization research (primary and secondary emotions) to enrich the analysis of the inter-group attribution of humanness, a concept that will be explored in Studies 5 and 7.

CHAPTER 5: INTRODUCTION TO STUDIES 1-5

The previous chapters have provided an overview of the research on infrahumanization that has been carried out thus far. They have situated infrahumanization in the broader context of research on inter-group relationships. They have looked at a theoretical framework for social group identification and for inter-group interaction as well as social-psychological processes related to infrahumanization. The present chapter brings together the concepts that have been covered thus far to introduce Studies 1-5, the first set of studies in the thesis. The first part of this chapter describes the goals and intentions for Part 1 of the thesis, which includes Studies 1-5. The second part of this chapter outlines the broad theoretical hypotheses for the thesis which will guide the first set of studies.

Goals of the Thesis

After engaging with the research on infrahumanization that had been published prior to 2007, when I started my PhD, it seemed that the most logical step forward in the field was to continue to pursue research on identifying the necessary and sufficient conditions that cause infrahumanization. This was the first goal of Studies 1-5.

Chapter 2 on infrahumanization described the background of research on infrahumanization as well as the methods and basic findings, potential mediators, the process, and consequences. It addressed the interaction of the variables status, identification, conflict, essentialism, ideology, and violence with infrahumanization. Conflict and high status are unnecessary conditions for triggering infrahumanization (but may still have a degree of influence). Certain ideologies, and exposure to violence enhance infrahumanization, but are not necessary conditions. Identification, meaningfulness, and essentialism have been suggested by researchers as necessary conditions, but as infrahumanization has been found with quasi-minimal groups, this is called into question.

So, despite a good deal of research into the question, it seemed that the field had so far insufficiently identified the necessary and sufficient conditions required to elicit infrahumanization. Indeed, even Leyens, the founder of the term and research in the area wrote as recently as 2009 that "the most challenging problem facing infrahumanization is to find the conditions that lead an out-group to be infrahumanized or not. We have not the slightest solution to this problem" (Leyens, 2009, p. 809).

This seems perhaps an overstatement of the situation. The field has insights into non-necessary and non-sufficient conditions (status and familiarity), non-necessary and sufficient conditions (conflict), and necessary and non-sufficient conditions (identification). But it is true that the necessary and sufficient contextual conditions required to induce infrahumanization are un-identified. Therefore, one overarching goal of the thesis was to contribute to the body of research on the contextual factors that precipitate infrahumanization. As described in the previous chapter, the plan was to take cues from research on related processes and test variables that affect those processes for how they might influence infrahumanization.

A second overarching goal was to expand the types of inter-group contexts evaluated, as most have focused on nationality. If national or ethnic groups were the only groups for which a humanness comparison was relevant, infrahumanization would need to be shown as distinct from nationalism and ethnocentrism. So, I was interested in the boundary conditions surrounding infrahumanization, and wanted to test to what extent the process occurs in groups outside of nationality. Below, I will describe how I addressed these goals in the first five studies.

Goals of Studies 1 and 2

The main goal of Study 1 was to examine the effect of threat on infrahumanization. As was described in the previous chapter, threat is known to influence the concepts of delegitimization (Bar-Tal, 1990) and in-group favouritism

(Hewstone, et al., 2002). As was also described previously, threat can be either realistic (also termed material; i.e., competition over scarce resources such as jobs, education, land, food) or symbolic (the potential to change the culture, values, religion, language, identity of a group).

As described in Chapter 3, group members can experience threat based on the contextual comparison of a relevant out-group. Research on symbolic threat is similar to the research from social identity theory on distinctiveness threat. Loughan, Haslam and Kashima (2009) hypothesized that symbolic threat, in particular, may be a necessary and sufficient condition for causing infrahumanization. Realistic threat can be a type of threat to the relative status of the group, as described in Chapter 3. Those who identify with the in-group would try to reaffirm the high status of the in-group through inter-group discrimination, possibly including infrahumanization.

Study 1 will address both symbolic and realistic threat, and how the threatening presence of an out-group affects infrahumanization of that out-group. The inter-group context is nationality, with the in-group being Australians, and the out-group being immigrants to Australia. Realistic threat, in this context, was operationalized as threats to the economy, to the education system, and to increased taxes and job competition. Symbolic threats were operationalized as changes to the language, dominant religion, and overall culture of the country. In the context of nationality and immigration, I hypothesized that these operationalizations of realistic and symbolic threats would affect the infrahumanization of the out-group of immigrants by the in-group of Australians.

Study 2 is a follow-up study based on the findings of Study 1. Results of Study 1 suggested that stereotype content may have played a part in the participants' inter-group emotion attributions. I hypothesized that the out-group was attributed certain emotions in Study 1 because those particular emotions were part of the group's

stereotype content. This hypothesis is supported by work of Paladino et al. (2004) who reported similar findings in the inter-group context of Italians and Germans. The researchers suspected that the stereotype of Italians as more emotional than Germans may have interfered with studying attribution of humanness when humanness was operationalized by secondary emotions. Viki and Abrams (2003) also had findings which the authors believed were complicated by emotional stereotype content using gender as an inter-group context, given that women are stereotyped as experiencing more emotions than men. I investigate this hypothesis further in Study 2 by operationalizing humanness only with non-stereotyped uniquely human emotions so that stereotype content would not be a confounding variable.

Goals of Studies 3, 4, and 5

Studies 1 and 2 did not succeed in creating an inter-group context in which infrahumanization was exhibited. Presenting an inter-group context in which infrahumanization would be observed was essential to the successful study of relevant mediating and moderating variables. Therefore, the following three studies focused on creating an inter-group context in which infrahumanization would be observed.

Studies 3, 4, and 5 increased conflict in the inter-group context, a variable that is not necessary for, but has been shown to enhance infrahumanization (Castano & Giner-Sorolla, 2006). Conflict was also relevant as it has been shown to influence moral exclusion, a process related to infrahumanization (Opotow, 1995). I varied the inter-group relationships using a sporting context (not confounded by nationality); a University college (i.e. dorm) context; and a moral context, with morality (moral or immoral individual) treated as an inter-group context. Again, in these studies, I also incorporated variables that influence processes similar to infrahumanization, as was addressed in the previous chapter. The purpose of doing so was that, in the event, that

infrahumanization was observed, I would be able to analyze those variables' relevance to infrahumanization.

To create an inter-group context that would facilitate infrahumanization, Study 3 used fans of rival sports teams. Half of participants were primed for a rugby inter-group context by watching a clip of a match between the two relevant teams. The other half of participants were attending a match of the in-group rugby team. Study 4 again used a sports context, but this time used nationality of the groups and morality of the groups as variables. Morality is a variable that has been shown to affect dehumanization, with perceived immorality of the out-group increasing dehumanization (Esses, et al., 2008). Finally, Study 5 sampled participants of a residence hall on a University campus and their attitudes towards residents of another rival hall. These halls have a particularly competitive and conflictual relationship with occasional incidents of provocative behaviour even off of the sports field. Identification of the participant with the in-group was measured in all three studies. This is a variable that has been shown to be related to infrahumanization, as well as moral exclusion and in-group favouritism.

Broad Theoretical Hypotheses

Before beginning with the data collection phase of the thesis, I could made several broad theoretical hypotheses. These were based on my background research on infrahumanization, my situating of infrahumanization within the theoretical frameworks of SIT and SCT, and the overview of infrahumanization's similarities with several other psychological processes. These hypotheses are non-specific to any particular operationalized variables or experimental conditions, but rather are general to the work as a whole.

Hypothesis A

The infrahumanization effect will be replicable using similar inter-group contexts as those used in the published research on infrahumanization.

Previous work on infrahumanization has noted the success of studies at observing infrahumanization, particularly in a nationality inter-group context. For example, a recent chapter that reviews research on infrahumanization observes that "despite the variety of paradigms that have been used, results were unanimous at supporting our hypothesis that people generally attribute more secondary emotions to their in-group than to out-groups" (Demoulin, et al., 2009a, p. 156). This may be an overstatement and, indeed, Hypothesis B qualifies it. However, it is certainly true that as of the start of this thesis in 2007, there was sufficient research out of various countries which had found an infrahumanization effect (Castano & Giner-Sorolla, 2006; Delgado, et al., 2009; DeLuca-McLean & Castano, 2009; Demoulin, et al., 2009b; Demoulin, et al., 2004b; Gaunt, 2009; Paladino, et al., 2002; Viki & Abrams, 2003) to allow me to predict that I would be able to replicate similar findings with Australian samples.

Hypothesis B

Infrahumanization is not common to all inter-group relationships.

Previous work on infrahumanization has noted the success of studies at finding infrahumanization in many different inter-group situations. The quote from Demoulin et al. (2009) is an example. While it is true that most of the published literature on infrahumanization reports finding the effect, there are works that do not find the effect (Bain, et al., 2010; Bain, et al., 2009; Marcu, et al., 2007). Other researchers have also noted the limitations of the phenomenon. Leyens et al. (2000) did not expect all inter-group contexts to be characterized by infrahumanization. As with other phenomena such as in-group favouritism, moral exclusion, delegitimization, and dehumanization, these expressions of inter-group discrimination are induced by a complex set of contextual inter-group characteristics. Similar to those inter-group processes, some inter-group relationships are harmonious, or even irrelevant to group members, and no

inter-group bias is observed. I believe that the findings of the present thesis will be in keeping with previous theory and research on inter-group processes.

Hypothesis C

Infrahumanization can be reliably predicted based on a set of necessary and sufficient conditions

Infrahumanization is an inter-group process. In this way, it should be similar to other inter-group processes such as stereotyping, social identification, and self-categorization. As previous chapters have described, the conditions under which a person engages in those inter-group processes have been experimentally tested and quite clearly defined (Branscombe, et al., 1999; S. A. Haslam, 2004; Schwartz & Struch, 1989; Tajfel & Turner, 1979; Turner, 1982, 1999; Turner, et al., 1987; Turner & Reynolds, 2001). In a similar way, I expect that there are specific parameters under which infrahumanization will occur.

And indeed, the focus of the literature has been on finding the necessary and sufficient conditions under which infrahumanization will occur. While the matter is far from settled, research has revealed that while status and familiarity do not affect infrahumanization, conflict and identification do have an effect. I expect that further research will reveal predictable conditions under which infrahumanization will occur.

Hypothesis D

Infrahumanization will be moderated by similar variables as related concepts that have been introduced in previous chapters such as in-group favouritism, moral exclusion, dehumanization, and delegitimization.

While I would not, prior to more research, equate infrahumanization with any of the related phenomena I have reviewed thus far, I do make the prediction that infrahumanization is similar to these processes and will, therefore, be moderated by

similar processes. In particular, I suspect that threat, identification, morality, and conflict will affect the extent to which an in-group infrahumanizes an out-group.

I now turn to the first of five studies assessing the variables which impact infrahumanization in several different contexts, using an Australian sample.

CHAPTER 6: STUDIES 1 AND 2

Introduction

As described in the previous chapter, Study 1 sought to extend research on infrahumanization by evaluating the potential relationship between threat of an out-group towards an in-group and the infrahumanization of that out-group. The literature on inter-group threat is quite broad, with many different types of threat identified. In Study 1, I brought together two perspectives in my theoretical analysis and operationalization of inter-group threat types.

In Chapter 3, I reviewed literature on Social Identity Threat, a body of work that identifies threat types that are encountered in inter-group relationships, but are specifically related to how the out-group characteristics or actions affect the identity of the in-group and how this affects group based self-esteem. I proposed several types of threat that are specifically identity related and that are relevant to infrahumanization, including categorization threat, distinctiveness threat, acceptance threat, threats to relative status, and value threats.

As introduced in Chapter 5, a distinct but related literature on inter-group threat called integrated threat theory describes two broad categories of inter-group threat, symbolic and realistic (Stephan & Renfro, 2004). Symbolic threat is threat to the content of the group identity. It is threat to a group's characteristics or makeup such as potential to change the culture, values, religion, language, identity of a group. Symbolic threat is also referred to in the literature as cultural threat (Buckler, Swatt, & Salinas, 2009; Glaser, Dixit, & Green, 2002). Realistic threats are those that challenge the material well-being of the group. These are competition over scarce resources such as jobs, education, land, and food, that would contest a group's prosperity and social standing. Realistic threat is also referred to in the literature as economic threat

(Buckler, et al., 2009; Glaser, et al., 2002). It is these types of threat that have been investigated in the literature on infrahumanization.

Threat has been both theorized as a predictor of infrahumanization and a mediator between infrahumanization and discrimination. A recent study on infrahumanization found that infrahumanization of a nationality out-group affected discrimination against that out-group and that this relationship was mediated by symbolic threat. Discrimination was operationalized as not allowing the group (Turkey) into the European Union and symbolic threat was operationalized as the extent to which Turkey's presence would change European values, customs, identity, and culture (Pereira, Vala, & Leyens, 2009). So presentation of the out-group as lacking secondary emotions affected the degree of humanity of the out-group and this degree of humanity influenced the perception of symbolic threat and the opposition to Turkey's admission in the EU.

Testing a different relationship between infrahumanization and threat, Leyens (2009) cites two unpublished studies that measure the effect of threat on infrahumanization. The first showed that symbolic threat correlated positively with infrahumanization and another showed that symbolic threat produced infrahumanization. Study 1 of this thesis manipulated threat to investigate the effect of threat on infrahumanization, and also measured threat and altruism to analyze the mediation of perceived threat of an out-group on altruism towards an out-group.

For Study 1, I chose to operationalize threat as both symbolic and realistic to be in keeping with the infrahumanization literature. At the same time, I saw parallels between the threat types described in the integrated threat theory literature and the Social Identity Threat literature. In particular I drew a comparison between what is termed symbolic threat and what is described as distinctiveness threat in the Social

Identity Threat literature. Likewise, I drew a comparison between realistic threat and status-based threat from the social identity threat literature. I made predictions based on these conceptual relationships. I will explain these relationships in more detail below.

The concept of distinctiveness threat follows from the SIT idea that positive self-esteem can be garnered from positive in-group distinctiveness in a relevant social comparison (Ellemers, et al., 2002). Group members value being different from an out-group in a positive way. Study 1 presents participants with an Australian and migrant inter-group context. Participants were Australians reading about migrants to Australia. I hypothesized that posing migrants as a symbolic threat, an influence to change the culture, religion and language of Australia, would pose distinctiveness threat to Australian participants. If "we" change to be like "them," we lose our positive distinctiveness. Highly identified threatened group members are likely to respond to distinctiveness threat with self-stereotyping to emphasize distinctiveness (Nadler, et al., 2009), inter-group differentiation, and/or out-group derogation (Branscombe, et al., 1999). As described in Chapter 4, the infrahumanization process involves intergroup differentiation that denies the valued trait of humanness. Therefore, symbolic threat is likely to lead to distinctiveness threat, which would lead to positive intergroup differentiation, which may be expressed as infrahumanization.

Threats to relative status occur for high status groups when low status groups threaten the established status differential. In Study 1, the in-group is Australians and the out-group is migrants. According to data from the Australian Bureau of Statistics (ABS), compared with native Australians or citizens, migrants to Australia have lower social participation, have fewer friends and social support, are less likely to be employed ("Social participation of migrants," 2008), are less likely to be purchasing a home and more likely to be renting ("Housing arrangements: Housing of recent

migrants," 1998), are more likely to work blue collar jobs, and are less likely to speak English ("Paid work: Migrants in the labour force," 1998). From this I concluded that migrants in Australia are perceived to have a lower status than Australian citizens. This inter-group relationship was important for the status based and realistic threat condition.

The realistic threat condition presents information that the out-group is threatening the economic wellbeing of the in-group (i.e. taking high paying jobs and abusing government assistance). Therefore, realistic threat is likely to lead to a threat to the relative status of the high status in-group, Australians. Participants read about how tax-paying Australians are losing money in government programs to fund migrants and losing high status jobs to new competition posed by the mignant out-group. Research shows that high identifiers are likely to engage in inter-group differentiation as a result of status threat (Ellemers, et al., 2002). Again, as the infrahumanization process involves inter-group differentiation, therefore realistic threat is likely to lead to status based threat, which will be expressed as infrahumanization.

In summary, symbolic threat is likely to cause distinctiveness threat, resulting in infrahumanization, and realistic threat is likely to cause threats to relative status of the in-group and this is also likely to result in infrahumanization.

A relevant question would be, then, which type of threat (symbolic or realistic) is most influential in determining to what extent an out-group will be infrahumanized? The research on infrahumanization has only suggested symbolic threat as a factor influencing infrahumanization (Leyens, 2009). Leyens cites unpublished work in which symbolic threat both did and did not have a relationship with infrahumanization. However, I propose that both types of threat have the potential to affect infrahumanization.

Symbolic threat and realistic threat are threats to two different types of in-group characteristics. Symbolic threat challenges characteristics that are the cultural aspects of what makes the group positively distinct. Realistic threat challenges characteristics that are the more material aspects of what defines the group. Several studies find that perceived symbolic and realistic threat posed by the in-migration of non-citizens affect attitudes towards immigration and immigrants. In some circumstances, such as an Australian sample evaluating refugees, both symbolic and realistic threats are predictive of prejudice towards immigrants (Schweitzer, Perkoulidis, Krome, Ludlow, & Ryan, 2005).

In other studies, realistic and symbolic threat are found to be differentially predictive of prejudice and discrimination based on the nature of the intergroup relationships. For example, symbolic threat was related to Arab immigration and realistic threat was related to Mexican immigration in a US sample (Hitlan, Carillo, Zarate, & Aikman, 2007). In a similar study, symbolic threat predicted prejudice toward Hindus and realistic threat predicted prejudice toward Muslims in an Indian sample (Tausch, Hewstone, & Roy, 2009).

Symbolic and realistic threat can also have different effects depending on the outcome measure. While realistic threat predicted opposition to immigrants in European countries, symbolic threat predicted opposition to naturalization of immigrants (Pereira, Vala, & Costa-Lopes, 2010). And realistic threat mediated effects of individual differences on employment attitudes toward migrants, symbolic threat mediated effects on cultural assimilation of migrants.

Based on these findings of the effects of symbolic and realistic threat on attitudes towards immigrants and immigration, I expect that symbolic and realistic threat are both likely to influence immigration. It seems that, at times, both impact out-group attitudes and, at times, the particular intergroup relationship or the particular

attitude being assessed are differentially affected by symbolic and realistic threat. I wanted to test the idea that when a group's symbolic characteristics (culture) were important for the self-definition of the in-group, symbolic threat would have an effect on infrahumanization. But when realistic characteristics (economy and security) were important for the self-definition of the in-group, realistic threat would have an effect on infrahumanization.

To examine this process, Study 1 of the thesis measured attribution of humanness to migrants to Australia and Australians in an Australian sample after being presented with either symbolic or realistic threats. To give a brief overview of the study, in Part 1, participants were first primed to either think of the "national nature" of Australia as either based on symbolic (e.g., Vegemite, mateship) or realistic (e.g., low unemployment, high standard of living) attributes. In Part 2, they were presented with the manipulation of the threat type, which gave information that migrants are a challenge to either the symbolic or realistic integrity of the nation.

Therefore, for some participants, the self-definition attributes and threat type "matched". That is, they were primed to think of both symbolic self-defining attributes and symbolic threat or both realistic self-defining attributes and realistic threat. For other participants, the self-definition attributes and threat type did not match.

Finally, participants attributed emotions to either the Australian in-group, or the immigrant out-group. Emotion words are classified in terms of their level (primary/non-uniquely human and secondary/uniquely human) and in terms of valence (positive or negative). Infrahumanization would be indicated by greater attribution of positive and negative secondary emotions to the in-group than the out-group.

Firstly, I predicted that Australians would infrahumanize migrants. That is, secondary emotions would, overall, be rated as more characteristic of Australians than of migrants, irrespective of the valence of the emotions (H.1.1). I further predicted that

infrahumanization would be greatest when migrants are posing a threat to the very characteristics that define the country ("matched" conditions). Therefore, infrahumanization would be greatest if the type of threat posed by immigrants in Part 2 was the same type of characteristic which defined Australia in Part 1. Otherwise, the threat presented in Part 2 would not be relevant to the in-group identity presented in Part 1, and there would be less infrahumanization of the out-group (H.1.2).

Study 1

Methods

Participants. Two hundred, thirty-two participants (125 male, 107 female, mean age 24.46) were recruited from public spaces on the campus of Australian National University. Participants were invited to complete an anonymous and voluntary 10-minute questionnaire without compensation.

Design. Each participant was randomly assigned to one condition of a 2 (national nature: symbolic/realistic) x 2 (threat type: symbolic/realistic) x 2 (group rated: in-group/out-group) between participants design. Within each condition was another 2 (level of emotion: primary/secondary) x 2 (valence of emotion: positive/negative) within subjects design. Therefore, the full design was a five-way mixed design. The in-group was Australians and the out-group was migrants to Australia.

Materials. Questionnaires were comprised of three parts. The first and second parts were, ostensibly, two separate studies, that were combined into one questionnaire "to save paper." I will refer to the first part as "Study 1" and the second two parts as "Study 2", as they were presented to participants. In reality, Parts 1 and 2 were the two between participants manipulations. The third part contained the emotion assessment items and demographic questions.

"Study 1" was a manipulation of the national nature of Australia variable, using a linguistic framing paradigm (Jetten, Spears, & Manstead, 1997). The goal was to have participants in the realistic national nature condition agree with mildly worded statements regarding the realistic character of Australia and disagree with extremely worded statements about the symbolic character of Australia. In this way, participants would be primed to believe that the realistic characteristics of Australia are what make up the national nature. In the symbolic national nature condition, there would be extreme realistic statements and mild symbolic statements and this would lead participants to agree that symbolic characteristics of Australia are what make up the national nature.

Specifically, participants were asked to indicate agreement or disagreement with 12 statements in two categories. Symbolic characteristic statements were labeled "Habits" and realistic characteristics were labeled "Stability." Agreement was indicated by circling the word "agree" or "disagree" after each statement. The "stability" statements suggested that the nature of Australia was based on its realistic, economic and defence strength, while the "habits" statements suggested that the nature of Australia was based on its symbolic cultural traits. In each condition, the statements for the intended salient condition were made more moderate and easy to support than those in the non-salient condition, thereby aiming to generate more agreement with the salient category. For example, in the "habits" salient condition, participants were given moderate statements regarding Australian culture and people (e.g., "Australians are relatively straightforward in their dealings" and "Lots of Australians enjoy the footy") and extreme statements regarding Australian realistic and defense stability (e.g., "Australia is absolutely secure against international threat" and "Everyone in Australia can earn a decent living"). The goal here was to make participant agree with the more

moderate statements, thereby persuading the participant to agree that "habits" (or symbolic factors) are what characterize Australia.

By contrast, in the "stability" salient condition, participants were given more moderate statements regarding Australian economy and defence (e.g., "Australia is generally secure against international threat" and "Most people in Australia can earn a decent living") and more extreme statements regarding Australian culture and people (e.g., "Australians are absolutely straightforward in their dealings" and "Everyone in Australia enjoys the footy"). The goal of this manipulation was to persuade the participant to agree that "stability" (or realistic factors) are what characterizes Australia by making the statements that support that opinion more acceptable than those supporting the opinion that "habits" (symbolic factors) define Australia.

Following each set of traits (habits/symbolic and stability/realistic) was an item asking participants how many times they agreed with the above statements. The goal of this question was to draw the participants' attention to the nature of their agreement or disagreement with the information given. They would do this by noting their agreement with the realistic ("stability") or symbolic ("habits") statements. The final question asked participants with which set of traits they most agreed, and therefore which set they believed was most representative of Australia. This was a manipulation check which provided evidence of which set of statements the participant found most persuasive, and, therefore, which national nature (symbolic or realistic) was primed.

"Study 2" began with the second manipulation (i.e., threat) in the form of one of two prepared reports on the effects of the migrant population on Australia. One report described the realistic impact of immigration and the other described the symbolic impact of immigration. All statistics used in the reports were taken from the Australian Bureau of Statistics census data available on their website ("Educational attainment: Migrants and education," 1996; "Family formation: Cultural diversity in marriages,"

2000; "Labour force participation of migrants," 2006; "Population composition: Asian-born Australians," 2001; "Population composition: Languages spoken in Australia," 1999; "Population growth: Coming to Australia," 2001; "Religious affiliation and activity," 2004).

In the "Culture" (symbolic threat) condition, information was given about migrant influence on Australian population, language, marriage and religion. Statistics included such statements as, "Between 1971 and 2001, the proportion of all Australians affiliating with Christianity fell by about 20%, while those affiliating with a non-Christian religion increased 5 times," and "In 1996, 15% of Australia's population spoke a language other than English at home." In the "Economics" (realistic threat) condition, information was given about migrant influence on Australian population, employment, housing, and education. Statistics included such statements as, "In 1999 the unemployment rate was much higher for migrants (6.2%) than for people born in Australia (4.9%)" and "30% of all recent migrants were receiving financial assistance from the government for housing."

Each condition closed with three manipulation check questions to assess reading comprehension. Participants were asked to indicate their degree of agreement (1 = very little; 7 = very much) with statements reflecting information found in the passage they had just read. For the realistic threat condition, items included, "The number of migrants employed as professionals is higher than Australian born citizens," "The migrant population in Australia is increasing," and "The unemployment rate for recent migrants is higher than for Australian born citizens." For the symbolic threat condition, the items included, "The migrant population in Australia is increasing," "The number of Australians affiliating with a non-Christian religion is increasing," and "The number of mixed marriages in Australia is increasing." All statements correctly reflected the information given, so higher numbers reflected comprehension of the manipulation.

"Study 2" continued with a section on emotion attribution. This section contained the dependant variables and was between-subjects for the variable "group rated." Participants were asked to rate the extent to which they believed that each emotion was felt by one of two groups, either "Australians" or "migrants in Australia." Emotions were rated on a 7-point scale (1 = just a little; 7 = quite a lot; Demoulin et al., 2004). The section included 12 emotions. Emotions belonged to each of four categories of primary positive (happiness, surprise, pleasure), primary negative (pain, anger, fear), secondary positive (optimism, hope, nostalgia), and secondary negative (guilt, shame, remorse) (Cortes, et al., 2005; Demoulin, et al., 2004a; Leyens, et al., 2001). Emotion categories were balanced in their mean values for valence and level within each category, according to Demoulin et al. (2004a).[8] For valence, positive categories had means of 6.13 (primary) and 5.75 (secondary) and negative categories had means of 2.58 (primary), and 2.82 (secondary). For level, primary categories had means of 2.69 (positive) and 1.93 (negative) and secondary categories had means of 5.50 (positive) and 5.31 (negative). The emotions were ordered randomly on the page.

"Study 2" included a section on demographic information about the participant (age, gender, ethnicity, citizenship, number of years in Australia and first language). These questions were followed by four items measuring perceptions of the overall impact of migrants in Australia. This part was a manipulation check to see if participants were persuaded by the manipulation of migrant threat type in Part 2. Participants were asked to indicate the degree of positive and negative impact they believe migrants have had on Australian culture (symbolic) and economy (realistic) (1 = very little; 7 = very much). Items were worded as "Please indicate the degree of positive impact you believe migrants have had on Australian culture," "Please indicate

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[8] The Demoulin et al. (2004) study surveyed US English speakers on the ratings of level and valence of emotions. For Studies 1-6 of this thesis, I categorize the level and valence of the emotion words based on these data.

the degree of negative impact you believe migrants have had on Australian culture," "Please indicate the degree of positive impact you believe migrants have had on the Australian economy," and "Please indicate the degree of negative impact you believe migrants have had on the Australian economy."

Procedure. Participants were approached by the researcher in public spaces on the campus of Australian National University during the lunch hour over the course of two weeks. Participants were told that the researcher was a psychology student looking for participants to take part in two consecutive studies. They were then asked to complete a 10-minute questionnaire. Participation was anonymous and voluntary, and no compensation was offered. Those who agreed to participate were provided with a pen and a questionnaire. The researcher then left to let the participants complete the questionnaire privately. The researcher returned approximately 10-minutes later to collect the pen and questionnaire. Participants were asked if they had any questions about the study. They were then debriefed and all questions were answered.

Results

Manipulation checks. Because of the nature of the group context (Australian in-group) and the task required of the study (reading a passage), non-citizens and people for whom English was a second language were removed from the sample. This left a sample of 211 participants (116 male, 95 female, mean age 24.54). There was also a potential need to eliminate participants based on failure of the final 4-item manipulation check in Part 3. This manipulation check asked participants to what degree migrants had a positive/negative effect on Australian culture/economy. If the manipulation in Part 2 of the type of threat posed by migrants had been effective, participants would respond that migrants have a negative impact on the aspect of Australian society that was described in the manipulation. For example, participants in the realistic threat

condition would rate that there were more negative effects of migrants on the economy than participants in the symbolic threat condition.

To evaluate the extent to which the manipulation was successful, I first created a variable of whether the national nature and threat type conditions were "matched" or "unmatched". Then I conducted a 2 (condition: matched/unmatched) x 2(manipulation check type: symbolic/realistic) x 2(manipulation check valence: positive/negative) with condition between subjects and manipulation check valence and manipulation check type as within subjects. The full three-way interaction would have indicated that the matched conditions differed from the unmatched condition on their ratings of the manipulation check. This interaction was not significant $F(1, 209)=2.14, p=.1$. From this I concluded that the manipulations of threat salience were largely *not* effective. I chose not to eliminate participants on the basis of failure on the manipulation checks as this would have cut out a majority of the sample and left too little statistical power for meaningful analyses.

Emotion variables. I examined the hypotheses using a five-way mixed ANOVA, with national nature, threat type, and group rated as between-subjects variables and level of emotion and valence of emotion as within-subjects variables. I created variables for four categories of emotion words, grouping them by their level and valence. Following procedures in the published literature (Castano & Giner-Sorolla, 2006; Cehajic, et al., 2009; Cuddy, et al., 2007b; Demoulin, et al., 2008; Vaes & Paladino, 2010b), I calculated means for each participant for the ratings of primary positive (happiness, surprise, pleasure), primary negative (pain, anger, fear), secondary positive (optimism, hope, nostalgia), and secondary negative emotions (guilt, shame, remorse). So, each participant had a single mean rating for each of the four emotion categories. These four dependent variables were within participants.

Level. There was a significant main effect for level of emotion. Overall, participants rated targets, in general, as experiencing more primary emotions (M=4.27, SD=0.72) than secondary emotions (M=4.07, SD=0.87), $F(1, 203) = 11.87, p<.001$. There was also an interaction effect for emotion level and valence, $F(1, 203) = 123.50$, $p<.001$. Whereas targets, in general, were rated as experiencing higher levels of positive secondary emotions (M=5.12, SD=1.30) than positive primary emotions (M=4.59, SD=.87), they were rated as experiencing lower levels of negative secondary emotions (M=3.01, SD=1.16) than negative primary emotions (M=3.95, SD=1.30).

Valence. There was a main effect for valence of emotion. Participants attributed more positive emotions to targets (M=4.85, SD=0.87) than negative emotions (M=3.48, SD=1.02), $F(1, 203) = 289.40$, p<.001. This was qualified by a two-way interaction between valence of emotion and group rated, $F(1,203)=4.12, p<.05$. Whereas migrant targets were rated as experiencing more positive emotions (M=4.91, SD=.09) than Australian targets (M=4.79, SD=.08), they were rated as experiencing less negative emotions (M=3.38, SD=.10) than Australian targets (M=3.58, SD=.09).

This was further qualified by a three-way interaction between the group rated, valence, and migrant threat type, $F(1, 203)=5.65, p<.05$. The two-way interaction of valence of emotion by group rated was only significant in the condition in which realistic threat was salient, $F(1, 203) = 7.56$, p<.001. In the realistic threat salience conditions, the difference in positive and negative emotion ratings was larger for migrants (M_{dif}=1.75, SD=2.10) than for Australians (M_{dif}=1.04, SD=2.10). The differences between positive and negative emotion ratings for migrants (M_{dif}=1.32, SD=2.10) and Australians (M_{dif}=1.37, SD=2.10) were not different in the culture threat salience condition.

Infrahumanization. The measure of infrahumanization (an interaction between group rated and level of emotion) was non-significant, $F(1,203) = 0.28, p>.05$.

However, there was a three-way interaction between group rated, valence and level of emotion, $F(1,203) = 5.63$, $p<.05$. This interaction is shown in Figure 6.1. On the left side of the graph, we see similar ratings of primary positive emotions for migrants (M=4.58, SD=0.80) and Australians (M=4.59, SD=0.84) and for primary negative emotions for migrants (M=3.94, SD=1.2) and Australians (M=3.96, SD=1.26). On the right side of the graph, we see an interaction between valence and group rated with a different pattern between positive and negative emotions. For negative secondary emotions, participants rated Australians higher (M=3.21, SD=1.54) than migrants (M=2.81, SD=1.1) on negative secondary emotions. But for positive secondary emotions there was actually greater attribution to migrants (M=5.24, SD=1.3) than to Australians (M=5.00, SD=1.26).

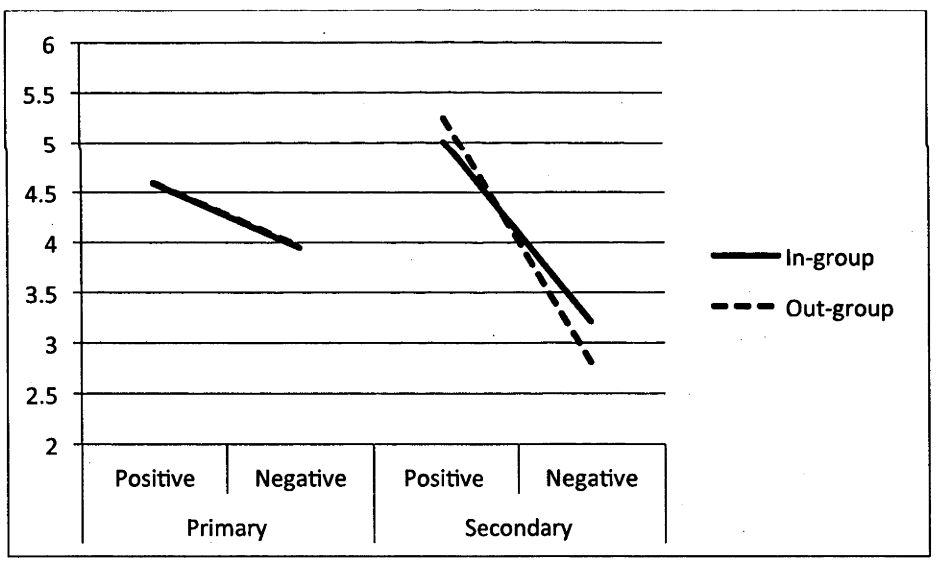

Figure 6.1. Three-way group rated, by level, by valence interaction showing infrahumanization qualified by valence.

This finding does not fully support the first hypothesis, that migrants would be infrahumanized on ratings of secondary emotions compared to Australians. According to the definition established in the literature and Chapter 2 of this thesis, it is only denial of both positive and negative secondary emotions that is operationally defined as

infrahumanization. To foreshadow, this effect will be replicated in other studies throughout the thesis.

Threat Salience. There were no significant effects between ratings of level of emotion, group rated, and the manipulations of national nature (symbolic/realistic) and migrant threat type (symbolic/realistic). Therefore, the second hypothesis was not supported and threat type salience or non-salience did not impact upon the expression of infrahumanization.

No other main or interaction effects were significant.

Discussion

Hypothesis 1.1. The results found for the first hypothesis do not replicate those found in previous studies (Cortes, et al., 2005; Cuddy, et al., 2007b; Leyens, et al., 2001; Viki et al., 2006). This past research has found that, as evidence of infrahumanization, group members rated the in-group as higher on both positive and negative secondary emotions than out-group members. However, in the present study, the out-group was only rated as significantly lower on negative secondary emotions and not on positive secondary emotions. Does this mean that they were at once infrahumanized and humanized or perceived as of equal status as the in-group? Not necessarily.

It is possible that the effect of rating the out-group equally to the in-group on positive secondary emotions, instead of lower, as expected, was a function of the particular emotions used and the particular out-group specified. The out-group selected for this study was migrants with the in-group of Australians. The emotions selected as "positive secondary" (the emotion category with the unexpected result pattern) were hope, nostalgia and optimism. Participants may have rated the out-group of migrants as superior to Australians on these emotions because migrants' goals and life circumstances are perceived to make them particularly disposed to these three emotions.

In making the decision to leave their home country, migrants may be perceived to feel hopeful and optimistic about the opportunities that await them overseas. Yet at the same time, migrants (as opposed to another out-group) may be perceived to have particular reason to feel nostalgia for the place and people they have left behind as compared to Australians[9].

Therefore, a potential explanation for the findings pertinent to the first hypothesis is related to theory on stereotype content. Indeed, research has shown that stereotypes can include positive content, such as ideas about a group having good listening skills and high levels of optimism and compassion (Madon, 1997). In addition, stereotype content has been shown to vary as a function of context and comparison group (van Rijswijk & Ellemers, 2002). In the case of this study, the comparison groups were Australians and migrants, and the context was Australian immigration. It could be the case that when participants were attributing secondary emotions, they were doing so based on group stereotypes and not based on how much humanness they perceived in the migrant out-group. In the context of migrating to Australia, the migrant out-group experience may reflect more optimism, hope and nostalgia than the Australian in-group.

Hypothesis 1.2. The second hypothesis was not supported. There are several possible explanations for this finding. The most obvious is that the manipulations failed to adequately create a salient threat context. This is exhibited by the finding that threat condition did not affect the manipulation check measure of views on migrants. That is, participants in the high threat salience conditions did not rate migrants as having any

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[9] This association between the out-group and the words selected was not foreseen at the beginning of the study. The words included in Study 1 were selected on the basis of their valence and level values according to the ratings in Demoulin et al. (2004a). The two primary and two secondary word groups averaged similar level values as did the two positive and two negative groups on valence values. In future studies, more care was taken in selecting words that were less likely to be stereotypical of the in-group or out-group.

more significant negative impact on Australia than did participants in the low threat salience conditions.

One reason for this could be because of information contained in the manipulation that pointed out that migrants are increasingly from the Asia-Pacific region. This detail may have led participants to view the migrant group as specifically "Asians." The content of the stereotype for the group "Asians" might have precluded participants from internalizing the specific details of the manipulation of "migrants". The stereotype content of the group "Asians" may, in fact, not be threatening, but rather seen as potential assets to enhance the value of the group. Indeed, after the present study was conducted, Bain et al. (2009) found that Chinese, Indonesian, and Singaporean out-groups (some of the major Asian populations in Australia) were not infrahumanized by an Australian sample. While these groups were not posed as migrant out-groups in the Bain et al. (2009) study, it is possible that these groups are not denied human uniqueness (secondary emotions) by Australians.

It is also possible that in society in general, there are norms inhibiting the expression of discrimination against immigrants. In fact, after participating, some participants expressed discomfort and reluctance to make emotion attributions on such a broad scale. This anecdotal observation is supported by research which shows that when reminded of a socially disadvantaged group, meta-stereotypes are activated for participants from the advantaged majority creating a desire to disprove such stereotypes (Shelton, et al., 2006, p. 325). Ellemers, Spears, and Doosje (2002, p. 179) write:

> [...] responses should not be considered in isolation or taken at face value as necessarily reflecting privately held views. Responses may often be strategic, addressing identity-expressive concerns and instrumental concerns directed by goals attuned to the dominant level of self which take into account the constraints and possibilities present in context.

In the present study, I asked participants how they themselves view immigrants and Australians. This may have activated meta-stereotypes of Australians as prejudiced towards immigrants, and may have been threatening to the participants' identity. A potential way around this problem in the future would be to ask how "people" view the parties in the relevant inter-group relationship. In this way, the participant would not be expressing an individual opinion and potentially admitting personal bias, but would be recognizing bias in society as an observer.

After obtaining these results, I searched the literature for other studies measuring attitudes other than infrahumanization towards "threatening" immigrants. One study reports that attitudes towards immigrants in the US were negative only when participants were faced with both realistic and symbolic threat (Stephan, Renfro, Esses, Stephan, & Martin, 2005). While the authors did not measure infrahumanization specifically, infrahumanization is a type of inter-group judgement and it is reasonable to expect that it may require presentation of both realistic and symbolic threat to elicit infrahumanization of migrants.

Another study, published after Study 1 was conducted, sheds light on the present findings (Costello & Hodson, 2011). It is very similar in that it assessed the effect of realistic and symbolic threat on attitudes towards immigrants. Their specific outcome measure was willingness to help the immigrant out-group. In their model, participants higher in social dominance orientation (SDO)[10] had reduced support for out-group help when presented with either realistic or symbolic threat or a combination of the two. There are several interesting aspects of Costello and Hodson's (2011) study that shed light on Study 1.

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[10] Social dominance orientation (SDO) is an individual difference in the degree to which a person prefers hierarchical or egalitarian intergroup relations. Compared to people low in SDO, people high in SDO have been found to prefer unequal distribution of goods and services and agree more with discriminatory policies Tausch, N., & Hewstone, M. (2010). Social dominance orientation attenuates stereotype change in the face of disconfirming information. *Social Psychology, 41*(3), 169-176..

Firstly, the threat manipulations used were short written descriptions, similar to those in Study 1. Realistic threat addressed higher competition for employment and immigrants requiring government assistance. Symbolic threat manipulations addressed change to the national language and expansion of "non-western religious beliefs and practices" (p. 222). Another similarity was that Experiment 1 of Costello and Hodson (2011) found that there was no main effect of threat on support for immigrant help. This result is similar to that of the present Study 1 in that threat did not produce negative reactions to immigrants for participants in general. In the Costello and Hodson (2011) study, it was only through increased SDO that threat affected attitudes toward immigrant help.

Infrahumanization was measured in the Costello and Hodson (2011) study as a mediator between SDO and helping in Experiment 2, rather than an outcome variable as in Study 1 of this thesis. The authors tested the prediction that increased symbolic (but not realistic) threat would increase infrahumanization and that this would be particularly the case among participants high in SDO. The results supported this prediction with SDO predicting infrahumanization under symbolic threat conditions only. In contrast to my predictions, they specifically predicted that symbolic threat would be more related to infrahumanization than realistic threat because while symbolic threat (language and religion) lead to a view of the out-group as "other," realistic threats highlight inter-group commonality in needs for resources.

Methodological Issues. Before moving on to the second study, it is useful to note several methodological suggestions from the present research for the future studies in this thesis. First, in this study, although the out-group was made salient in the second manipulation, there was no specific creation of a salient in-group. The first manipulation asked participants to consider traits of Australians, but not necessarily to think of themselves as part of that nationality. Also, there was no measure of

identification as an Australian, which also creates in-group salience. While it is not possible to make causal explanations between a lack of in-group salience and not detecting the infrahumanization effect, it may be valuable for future work to include a measure of in-group identification.

Second, there is the issue of stereotype content of the emotions chosen for the particular inter-group context created. One solution is to carefully assess the primary and secondary emotions chosen for rating and possibly to measure stereotype content of the emotion list as a pilot test to each study. Another is to use a longer list of emotions (than the 12 used in this study) so that the effect of each single emotion is muted. Both of these methods are used in Study 2.

When designing Study 1, I assumed that I would replicate the infrahumanization effect, and the aim was to analyse the variation in the effect based on threat context. However, I was not able to replicate this basic effect. Rather than conclude that Australians do not infrahumanize migrants to Australia and begin to study a different inter-group context, I decided to further investigate the suggested explanation for not obtaining results to support Hypothesis 1.1. As described, I reasoned that it was potentially stereotype content that interfered with the replication of infrahumanization. Therefore, I conducted a second study to tease apart the stereotype content of emotion attribution from the specific humanness dimension.

Study 2

Study 1 results suggest the possibility that infrahumanization may not be observed if there is stereotype content of the relevant groups contained within the primary and secondary emotions being rated. Study 2 was designed to test if Study 1 results were affected by stereotype content. If so, it would provide a way forward to finding an inter-group context in which infrahumanization would be expressed.

First, a pilot study was designed in which participants were asked to rate two separate out-groups (immigrants and the gay community) as well as an in-group member (university student) on primary and secondary emotions to establish any emotion related stereotype content. Based on this information, a scale of emotion attribution was created that could account for existing stereotyped secondary emotions and non-stereotyped primary and secondary emotions.[11] High ratings for out-groups on secondary *stereotyped* emotions would therefore *not* necessarily indicate that the in-group was granting greater humanness to the out-group. It is possible that an out-group would be rated high on stereotyped secondary emotions but low on other secondary emotions.

In the main study, participants were asked to attribute emotions to one of the three groups from the pilot study: a student in-group and an immigrant or a homosexual out-group. Participants rated both stereotyped and non-stereotyped emotions. It was in the analysis that two groups of emotions were assessed, those with stereotype content included and those with stereotype content excluded. The comparison between attribution of non-stereotyped secondary emotions to the in-group compared to the two out-groups was the measure of infrahumanization. Taking the information from the pilot study, it would then be possible to eliminate stereotyped emotions from the analysis, and assess infrahumanization after accounting for stereotype content.

One possible outcome was that I would detect infrahumanization with both stereotyped and non-stereotyped emotions included in the analysis. This would be a strong infrahumanization effect. Another was that I would see infrahumanization with only the non-stereotyped secondary emotions analysed. Finally, it was possible that I

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[11] While both primary and secondary emotions were measured in the pilot test assessing stereotyped emotions, it was only secondary emotions that were found to be significantly stereotypical of the social groups presented.

would not detect infrahumanization with either set of emotions. This would be a similar result found to that of Study 1.

The main study included one additional measure, an altruism scale. The altruism scale had two purposes. In the case of the third possible outcome, described above, the absence of infrahumanization, the altruism scale would provide a second measure of inter-group attitudes and behavioural intentions. Finding in-group favouritism in altruism, in the absence of infrahumanization, would be informative. It would provide evidence of the methodological efficacy of the creation of the inter-group context. It would demonstrate that the inter-group context was sufficiently salient to cause some inter-group differentiation. Second, if there was infrahumanization, the altruism scale would provide a way to measure the effect of infrahumanization on altruism, similar to previous studies that analyzed the effect of infrahumanization on helping.

The main study was a 3 (group context: student/immigrant/gay community) x 2 (stereotype content: included/excluded) x 2 (level of emotion: primary/secondary) x 2 (valence of emotion: positive/negative) mixed design. The group context variable was a between-subjects variable and the level and valence and stereotype content were within-subjects variables. Two separate ANOVAs were run to analyze the stereotype content variable. I hypothesized (H.2.1) that there would be infrahumanization in the stereotype excluded ANOVA, but not for the analysis of the full set of emotions. I expected that when stereotyped emotions were excluded from the analysis, there would be lower ratings of the two out-groups on secondary emotions compared to the in-group (more infrahumanization), but that this difference would not be present when the stereotyped emotions were included in the analysis.

In regards to the altruism scale, I made two predictions. The altruism scale included items about intent to engage in helping behaviours and intent to engage in

behaviours oppositional to the goals of the target group. First, I predicted that there would be main effect of group context on altruism with higher altruism towards the in-group than the out-groups (H.2.2). Secondly, if H.2.1 was supported, I predicted that there would be a negative relationship between infrahumanization and altruism (H.2.3).

Methods

Pilot Study. A pilot study was conducted to determine the stereotype content of emotions for the three group categorizations to be used in the main study. Forty-four participants (17 male, 27 female, mean age 20.70) were asked to rate a member of one of three groups (students, immigrants, or the gay community) using a list of 20 secondary emotions. The study was a 3 (group rated: student/immigrant/gay community) x 2 (level of emotion: primary/secondary) x 2 (valence of emotion: positive/negative) mixed design, with group rated between-subjects and level of emotion and valence of emotion within-subjects.

In Part 1, participants were given a brief "self description" of a third year university student. It included details about the person's background, current activities, and future plans. This description was held constant across conditions except in one detail: the description of being active in one of three on-campus groups. In the student condition, the target was in the Student Association. In the immigrant condition, the target reported being an immigrant who was active in the International Students Department. In the gay condition, the target was active in the Sexuality Department and Queer Collective. All groups are real on-campus organizations and this detail determined whether the target represented the group of students, immigrants, or the gay community.

In Part 2, participants were asked to rank 20 emotions on the degree to which the target felt them, with a rating of 1 for the emotion "felt most" and a rating of 20 for the emotion "felt least". In Part 3, participants were then given an opportunity to record any additional emotions the target would feel that were not mentioned in Part 2. Part 4

was a manipulation check of the group of the target. It asked participants "In the study situation described above, what community group is making an appeal to the ACT government?" and then gave three answer choices of "the student community," "the gay community," or "the immigrant community." Part 5 asked for demographic information, including sexual orientation, nationality, and student status.

All participants correctly identified the group membership of the target in the manipulation checks in Part 4. Participants who did not identify as heterosexual domestic students in Part 5 were removed from the study. This left 42 participants (16 male, 26 female, mean age 20.02). Therefore, all remaining participants correctly identified the target and were part of the assumed in-group of the study.

To analyse the rank order data, I performed a Kruskal-Wallis test, which is effectively a one-way ANOVA for rank order data. The independent variable was the condition of the participant (rating students, immigrants or members of the gay community). The dependent variables were the participant's rankings of the emotion words. Results showed that there were three emotions that were ranked as significantly different by participants in one condition versus the other two. A closer look showed that there was one emotion with a significantly higher rank by participants in each condition. Therefore, there was one stereotyped emotion for each of the three social categories.

In rankings, numbers closer to 1 were "felt most." Remorse was ranked marginally "higher" (closer to 1) for the student than for the other two targets (M_{stud}=13.0, SD=3.0; M_{gay}=15.46, SD=3.28; M_{immi}=16.30, SD=3.20), $F(2, 39)=3.16$, p=.057. As expected from Study 1, nostalgia was ranked significantly higher for the immigrant target than the other two targets (M_{stud}=11.73, SD=3.88; M_{gay}=13.46, SD=4.24; M_{immi}=8.73, SD=3.80), $F(2,39)=4.24$, $p<.05$. Shame was ranked significantly higher for the gay target than the other two targets (M_{stud}=19.09, SD=4.32; M_{gay}=14.50,

SD=4.62; M_{immi}=16.36, SD=3.53), $F(2,39)=4.10$, $p< .05$. Therefore, I concluded that nostalgia was a stereotyped emotion for immigrants, and shame was a stereotyped emotion for the gay community. As remorse was only marginally significant, it was not considered a stereotyped emotion for the student group and therefore there were only two stereotyped emotions, nostalgia for the immigrant condition and shame for the gay community condition.

Main Study. One hundred, eighty participants (51 men, 125 women, 4 missing data, mean age 19.17) were recruited from a first-year psychology participant pool, completing the study for partial course credit. For the purposes of the group salience manipulation, in which nationality needed to be held constant, the advertisement for participants stipulated that participants should be Australian citizens.

Materials. The study was a mixed design with three levels of a between-subjects condition variable (group context: student/immigrant/gay community). The other variables were made up of the emotion attribution task and were within-subjects. The study comprised five parts. The first part introduced the group context. The first item asked the participant if he or she identified with one of three groups: students, immigrants, or members of the lesbian, gay, bisexual or transgendered community, according to the group context condition. This was followed by an identification measure that assessed identification as a student, identification with his or her nationality, or identification with his or her sexuality. The identification measure had five items (α =.81), including, "I see myself as a student/as an Australian/in terms of my sexual orientation," and "I am pleased to be a student/to be Australian/with my sexual orientation" (Doosje, Ellemers, & Spears, 1995).

Part 2 was the emotion attribution measure. Participants were told that "Research shows that people often correctly guess the emotions of other people, even if they don't know much information about them." They were then asked to consider a

list of emotions and rate how either students, immigrants, or members of the gay community (according to their condition) experience them on a scale ranging from 1 "not at all" to 7 "extremely." The list of emotions included those 12 used in the first study plus four additional emotions. Importantly, it included the two stereotyped emotions of nostalgia and shame. The emotion words were part of one of four emotion categories. The emotion categories included four primary positive (pleasure, surprise, excitement, and happiness), four primary negative (pain, anger, fear, and sadness), four secondary positive (love, optimism, hope and nostalgia), and four secondary negative (guilt, remorse, shame, and embarrassment) emotions. The categorization was again based on Demoulin et al. (2004a).

To create a context for the altruism scale, Part 3 told a story of the relevant group (students, immigrants, or members of the gay community, according to the group rated condition) being in conflict with the local government. The short description read as follows:

> "The (student, immigrant, gay) community feels that they are being institutionally disadvantaged in comparison to (non-students, citizens, heterosexuals) and are pursuing changes in ACT government policy. Their goal is not to earn special privileges, but rather to achieve what they see as equity with (non-students, citizens, heterosexuals)."

It then stated that supporters of the community described would be organizing activities to raise awareness for their rights and for making an appeal to the local government.

Part 4 was an eight-item altruism scale of willingness to engage in five behaviours to help the community's movement, and three behaviours to detract from the community's movement ($\alpha = .80$). Helping behaviours included items such as, "I am willing to sign a petition" and "I am willing to wear a button in support of the movement." Detracting behaviours included items such as, "I am willing to attend a

counter rally to oppose the movement" and "I am willing to take down fliers to show discontent with the movement." Participants rated their agreement on a scale from 1 (strongly disagree) to 7 (strongly agree). The final part, Part 5, included demographic questions of age and sex and a multiple-choice manipulation check of the participant's knowledge of the group context of the study, asking, "In the study situation described above, what community group is making an appeal to the ACT government?" and provided the choices, "the student community," "the immigrant community," and "the gay community."

Results

Participants. Six participants were excluded because they were not members of the in-group relevant to their condition (student, Australian, heterosexual). Eleven participants were excluded because they failed the manipulation check. Therefore in the final analysis, there were 163 participants (47 men, 116 women, mean age 19.06). Data were analysed with two ANOVAs; one 3 (group context: student/nationality/sexuality) x 2 (level of emotion: primary/secondary) x 2 (valence of emotion: positive/negative) mixed ANOVA for the full set of emotions (stereotype content included) and another ANOVA with the limited set of emotions (stereotype content excluded).[12] The group context variable was a between-subjects variable and level and valence were within-subjects variables.

I created two groups of variables for emotion ratings. I found the mean for each participant for each of four emotions for the "full sets" with categories primary positive (happiness, surprise, pleasure, excitement), primary negative (pain, anger, fear,

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[12] I also analyzed the same set of data as a single 3 (group context: student/nationality/sexuality) x 2 (level of emotion: primary/secondary) x 2 (valence of emotion: positive/negative) x2 (stereotype content: included/excluded) ANOVA. That analysis was unusual in that there is redundancy in the data that is likely to artificially reduce the error variance. For this reason, the two ANOVAs were preferable. However, it is worth noting as it was useful in assessing the interaction of the stereotype content variable. There was a significant three way interaction of stereotype content by condition by level $F(2,160) = 5.38$, $p<.01$), but the results differed from the hypotheses in the same direction.

sadness), secondary positive (optimism, hope, nostalgia, love), and secondary negative emotions (guilt, shame, remorse, embarrassment). For the stereotype content absent emotion variables, the secondary positive category was averaged without nostalgia and the secondary negative category was averaged without shame.

Main Effects. In analysing the emotion attribution measures, there were main effects for level and valence in each of the ANOVAs. For the full set of emotions ANOVA, there were more primary emotions ($M = 5.18$, $SD = .08$) attributed to the target group than secondary emotions ($M = 4.79$, $SD = .08$), $F(1,160) = 67.24$, $p < .001$). There were more positive emotions ($M = 5.35$, $SD = 0.07$) attributed than negative emotions ($M = 4.63$, $SD = 0.10$), $F(1,160) = 68.69$, $p < .001$. For the stereotype excluded set of emotions ANOVA, the patterns were the same. There were more primary emotions ($M = 5.18$, $SD = .08$) attributed to the target group than secondary emotions ($M = 4.98$, $SD = .08$), $F(1,160) = 15.97$, $p < .001$). There were more positive emotions ($M = 5.43$, $SD = 0.08$) attributed than negative emotions ($M = 4.74$, $SD = 0.10$), $F(1,160) = 56.33$, $p < .001$.

Infrahumanization. There were no two-way level of emotion by group context interactions that would have indicated infrahumanization in either the full set of emotions ANOVA $F(2,160) = 0.45$, $p = 0.64$, or the stereotype excluded ANOVA $F(2,160) = 1.64$, $p = 0.20$. This result does not support H.2.1 that infrahumanization would be evident when the participants were considering non-stereotyped emotions.

Not only were results not significant, but the pattern of attribution was not what was expected. The expected pattern was for secondary emotion ratings for the student condition in the stereotype excluded ANOVA to be higher than for the immigrant condition and gay condition. As shown in Table 6.1, this was not the case. The difference between student and migrant condition was non-significant (t[318]=.44,

p=.11) and the gay condition was higher than for the student condition, t(318)=17.20, p>.05).

Table 6.1
Condition x Level for each emotion set ANOVA

		Full Set ANOVA		Stereotype Excluded ANOVA	
Level	Condition	Mean	SD	Mean	SD
Primary	Student	5.03	0.12	5.03	0.12
	Migrant	4.94	0.14	4.94	0.14
	Gay Community	5.58	0.14	5.58	0.14
Secondary	Student	4.67	0.12	4.95	0.12
	Migrant	4.60	0.14	4.68	0.14
	Gay Community	5.12	0.14	5.33	0.14

Two additional 4-way mixed ANOVAs were run including the same variables as previously with the addition of the between-subjects variable of identification (high/low). Identification was calculated with participants scoring above the median considered high identifiers and participants scoring below the median considered low identifiers. Identification did not qualify any of the above interactions.

In-group favouritism: Helping behaviour. Despite the absence of infrahumanization, there was evidence of in-group favouritism in terms of altruistic behaviour. I ran a 2-way mixed ANOVA between group context (students/immigrants/gay community) and level of identification (high/low) on participants' altruism scores. Altruism scores were calculated by taking the mean for each participant of the helping behaviours and the oppositional behaviours (reverse scored). There was a significant two-way interaction, $F(2,157)=10.37$, $p<.001$ that is shown in Figure 6.2. On altruism, participants with low identification as a student, Australian, or heterosexual person were more willing to engage in altruistic behaviour for immigrants (M=4.24, SD=.22) and the gay community (M=4.16, SD=.22) than for the student community (M=3.51, SD=.29). On the other hand, participants with high

identification as a student, Australian, or heterosexual person were more willing to be altruistic for the student group (M=4.80, SD=.19) than the immigrant (M=3.52, SD=.24) or gay community (M=3.67, SD=.32). Therefore, there was more altruism for out-groups among low identifiers, and less altruism for out-groups among high-identifiers. I describe this result as an in-group-favouritism effect.

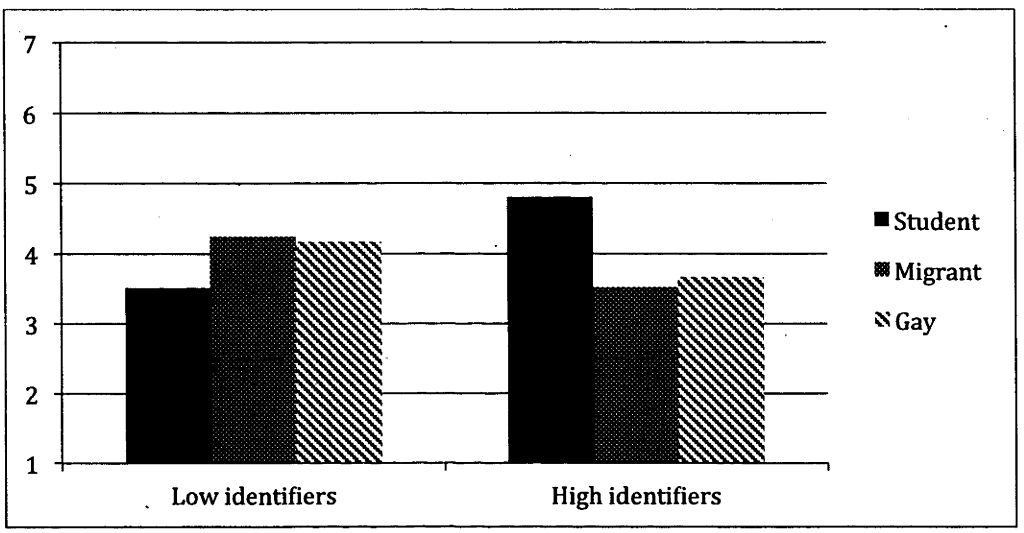

Figure 6.2. Shows the two-way interaction between altruism and group context with more help for the out-groups by low identifiers and more help for the in-groups by high identifiers.

Discussion

There was no infrahumanization effect with either the stereotyped or the non-stereotyped emotions. Contrary to expectation, the non-stereotyped emotions were attributed more to the groups than to the stereotyped emotions. Also unexpectedly, out-groups were not rated as having significantly less secondary emotions compared to the in-group even when considering non-stereotypical emotions.

In fact, the gay community out-group was rated as having more secondary emotions than the in-group, even when stereotyped emotions were omitted. One possible explanation is that the gay community has an overall stereotype of being more emotional than the heterosexual community and measuring infrahumanization by emotion attribution is not suitable for this particular group. Another explanation for the

overall results in the study is that the out-groups were simply not being infrahumanized or discriminated against in humanness. This result persisted even when identification was taken into account, even though published literature has shown that high identifiers have higher levels of infrahumanization (Demoulin et al., 2004b).

At the same time, there was in-group favouritism of a different type at work in the inter-group contexts created. High identifiers were more willing to help their in-group than either of the out-groups and low identifiers were more willing to help the two out-groups than the in-group. This suggests that the non-significant effects on the infrahumanization measures was not due to non-salient inter-group contexts. Rather, the particular inter-group contexts created did not elicit infrahumanization in the given sample.

General Discussion

Studies 1 and 2

I have chosen to present Studies 1 and 2 together as Study 2 was designed to help explain the results of Study 1. The initial aim of Study 1 was to analyse the effect of symbolic and realistic threats on infrahumanization in a group context of citizenship. With the effect of infrahumanization being only partially replicated, a clear analysis of threat context was not possible. The analysis, therefore, turned to an attempt simply to replicate the effect of infrahumanization in an Australian sample, a population about which few infrahumanization studies have been published. To do this, in Study 2, I tested the effects of stereotype content on infrahumanization measurement to see if, in Study 1, infrahumanization was not observed because of stereotype content. I proposed that the failure to replicate an infrahumanization effect in Study 1 was due to the specific combination of the groups being studied (immigrants and Australians) and the positive secondary emotions used for analysis (hope, optimism, nostalgia). Study 2 was designed to examine whether, after controlling for stereotype content of the groups'

emotions, an infrahumanization effect could then be detected. However, again, I did not find the effect of infrahumanization, either for out-groups of immigrants or the gay community.

One possible interpretation of these findings is that the groups were not significantly meaningful, an aspect of the inter-group context that has been theorized to be essential for infrahumanization (Leyens, et al., 2003). However, it is important to note that the groups were sufficiently meaningful for in-group favouritism to be exhibited, particularly for the highly identified group members (i.e., the people for whom it was meaningful).

The question remains why infrahumanization was not detected in these particular inter-group contexts within an Australian sample in Study 1 or Study 2. The explanation that stereotype content of emotions used in the analysis was masking the effect was controlled for in Study 2, and the effect was still not present. Another issue could be that infrahumanization by emotion attribution is simply not universal and is not going to occur with an Australian sample. However, this seems unlikely with the abundant amount of data collected in various countries throughout Europe (Delgado, et al., 2009; Demoulin, et al., 2004b; Gaunt, et al., 2002; Leyens, et al., 2003; Leyens, et al., 2000a; Paladino, et al., 2002). The published studies in Australia demonstrate dehumanization by trait attribution (more HN traits to the in-group than the out-group) but not infrahumanization by trait attribution (more HU traits to the in-group than the out-group) and no measure of infrahumanization by emotion attribution (Bain, et al., 2009; Loughnan & Haslam, 2007).

A third possibility could be that the inter-group contexts did not have qualities sufficient to induce infrahumanization. The sample did demonstrate one example of the inter-group processes of in-group favouritism in the altruism measure. These results indicate that there was at least some degree of inter-group differentiation. However, it

is possible that the conditions needed for infrahumanization are distinct from those required to induce other examples of in-group favouritism. Following Studies 1 and 2, this seemed the most likely explanation, and so the next studies were planned with the understanding that they would require different inter-group contexts for infrahumanization to be observed.

Planning the Next Studies

As was addressed in previous chapters, the necessary and sufficient conditions required to induce infrahumanization have not been isolated. The initial goal of this thesis is to contribute to that analysis. However, in order to test variables that have not been addressed, it is necessary to find an inter-group context in which infrahumanization can be elicited, and then introduce additional variables. Studies 1 and 2 were unsuccessful in finding such an inter-group context.

In Chapter 5, in the broad theoretical hypotheses, I hypothesized that I would replicate the infrahumanization by emotion attribution effect in an Australian sample. Following the null findings of Studies 1 and 2, I was not yet ready to conclude that this hypothesis was not supported. To test that overarching hypothesis, and to be able to proceed with investigating the necessary and sufficient conditions, Studies 3, 4, and 5 focused on replicating the infrahumanization effect.

I moved forward with the net three studies under the working assumption that the inter-group contexts in Studies 1 and 2 did not have the necessary qualities sufficient to induce infrahumanization. In Studies 3-5, I tried to overcome this problem in several ways. First, I introduced groups outside of nationality, the group context on which most of the research has been done and that I had used unsuccessfully in Studies 1 and 2. Secondly, one variable that has been shown to increase infrahumanization, though it is not necessary, is conflict (Castano & Giner-Sorolla, 2006). Therefore, one

variable that Studies 3, 4 and 5 used to intensify the inter-group relations was that of direct competition or conflict between groups.

The following chapter describes Studies 3, 4, and 5. The studies are similar in that they had the shared goals described above. They tested novel inter-group contexts and tested for different inter-group variables that might affect infrahumanization.

CHAPTER 7: STUDIES 3, 4, AND 5

Introduction

Studies 1 and 2 used contexts of nationality and sexual orientation without being able to replicate published infrahumanization findings for emotion attribution. This was unexpected, particularly for the nationality context, considering that much of the work done previously had focused on inter-group contexts of ethnicity or nationality (Castano & Giner-Sorolla, 2006; Cehajic, et al., 2009; Costello & Hodson, 2011; Cuddy, et al., 2007b; Delgado, et al., 2009; DeLuca-McLean & Castano, 2009; Demoulin, et al., 2005; Gaunt, 2009; Paladino, et al., 2002; Paladino, et al., 2004; Vaes, Heflick, & Goldenberg, 2010a; Vaes & Paladino, 2010b; Wohl, et al., 2011). Still, it was not possible to make any firm conclusions about the processes that give rise to infrahumanization within an Australian sample, or others, with data from only two studies. Therefore, continuing on from Studies 1 and 2, the next step was to continue to try to replicate the published findings of infrahumanization in an Australian sample while still including additional variables to test the parameters of infrahumanization. A second aim was also to expand the types of inter-group contexts studied beyond nationality groups in order to further contribute to the existing literature.

The following three studies were designed to try to increase the intensity of the inter-group context in terms of identification, competition, contact, and conflict, as these elements, although not necessary to cause infrahumanization, have been proposed to increase the likelihood of infrahumanization being expressed. Identification has been found to have a positive relationship to infrahumanization in several studies (Demoulin, et al., 2004b; Leyens, et al., 2001; Rohmann, et al., 2009). Conflict is yet to be found as a sufficient condition to cause infrahumanization, but it has only been examined as a moderating variable in one study (Gaunt, 2009). Still, it can be inferred that conflict affects infrahumanization, as knowledge of inter-group killing (a type of conflict) has

been found to increase infrahumanization (Castano & Giner-Sorolla, 2006). Also, as conflict has been shown to have a positive relationship with other similar processes, such as moral exclusion, it is reasonable to hypothesize that increasing the conflictual relationship between groups should create conditions in which infrahumanization is expressed (Opotow, 1995). Therefore, I hypothesized that the conditions created in Studies 3, 4, and 5 (confict, identification and competition) should evoke infrahumanization.

Study 3 used an Australian Rugby Union context with fans from a local team (Brumbies) as an in-group, assessing their fellow Brumbies fans and fans of an opposing team (Waratahs) from a different state as an out-group. Study 4 used a context of Olympic athletes from different countries and of different moral standing as targets for infrahumanization. Study 5 used participants of a university residence college assessing students from their rival college. All studies assessed infrahumanization by emotion attribution. Study 5 also assessed human nature and human uniqueness by trait attribution. Additional variables included social identification, nationality, morality, and in-group favouritism by point allocation. The rationale for these additional variables will be described in each study.

Study 3

Study 3 had two goals. The first was to look for infrahumanization by emotion attribution in a different group context from Studies 1 and 2. The second was to begin to look at other potential measures of infrahumanization aside from emotion attribution, as there are theoretical arguments in the literature that emotion is only one of three aspects of what makes humans unique from animals. As I observed earlier, Leyens et al. (2000b) found that the lay conception of humanness comprises three parts: language, intelligence, and secondary emotion. They theorized that all are necessary and none is sufficient to perceive the full humanity of an out-group. Therefore, I thought it was

important to begin experimenting with measurement of language and intelligence, in addition to secondary emotions, which are the subject of focus in all other infrahumanization studies.

Sporting Context

I chose to use sports teams as an inter-group context in Study 3 because I expected sports affiliation to be a particularly strong social identity in which the inter-group context is particularly salient. Also, it is possible that participants were conscious of an anti-discrimination norm in their responses in Studies 1 and 2 due to the explicit nature of the out-group evaluations made towards disadvantaged groups. However, in the world of sport, the expression of derogatory statements against the out-group is quite common, and there is even a certain degree of acceptance of intergroup aggression among fans (Rookwood & Pearson, 2010). It is with this in mind that I chose to use sports team fans as a context for Study 3.

Previous research has shown that participants will show out-group derogation against fans of a rival sports team in terms of secondary emotions (Gaunt, et al., 2005; Martin, Bennett, & Murray, 2008). That is, fans will infrahumanize the fans of an opposing team. Belgian soccer fan participants, for example, were found to predict a more extended length of experiencing uniquely human secondary emotions for their in-group fans than for out-group fans (Gaunt, et al., 2005). In a developmentally focused study, Scottish children aged 6-7 and 10-11 attributed greater secondary emotions than primary emotions to their own team, while attributing secondary and primary emotions equally to the opposing team (Martin, et al., 2008). These studies show that sports team affiliation can be a rich inter-group context for studying infrahumanization. [13]

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[13] It was only later that I realized that while both of the studies found infrahumanizing attitudes using a sport context, they also were using a nationality context with in-group and out-group fans being different nationalities. This will be more fully elaborated upon in the Discussion section of this study.

Finding an Australian inter-group context in which infrahumanization by emotion attribution is exhibited was one of the goals of Study 3. With that accomplished, it would be possible to include additional variables besides inter-group context to further contribute to the theoretical understanding of infrahumanization. The second goal of this study had to do with the measurement of infrahumanization.

Infrahumanization and Language

Three essences of humanness. With the exception of some work using human and animal-related words and vocabulary (Viki, et al., 2006), previous research on infrahumanization has focused almost exclusively on studying infrahumanization along the emotional aspect of humanity. Studies measure to what extent participants believe that in-groups and out-groups experience uniquely and non-uniquely human emotions. But a person's understanding of what makes a group human is not only made up of ideas about primary and secondary emotions. Rather, the conception of humanness is made up of three "essences": secondary emotion, intelligence, and language (Vaes, et al., 2003). As lay observers, people believe these three elements make us unique from other beings. Therefore, the presence or absence of these three elements influences the degree to which a person is attributed with "humanity".

There is yet to be a clear link expanding the measurement of infrahumanization to the language and intelligence aspects of humanity. Theoretically, to more accurately define infrahumanization as the attribution of some people as "less human" than others, infrahumanization does not need to be exhibited in all three aspects of humanity. If humanness is thought of as a continuum, as it is in infrahumanization research, in which groups are attributed varying degrees of humanness, to deny any aspect of humanity to an out-group is to place it towards the non-human end of the continuum. Failure to observe the infrahumanization effect in emotion terms does not eliminate the possibility that a group is being infrahumanized, as the group may be thought less human in one or

both of the other two dimensions. Therefore, it is useful to have additional measures of humanness that assess intelligence and language as other domains in which a group may be infrahumanized.

Previous work provides evidence that infrahumanization in emotion terms will generalize to the intelligence aspect of humanity. Leyens et al. (2000) found that in addition to denying secondary emotions to an out-group, while in-group participants attributed higher "competence" to the out-group, they denied the out-group superior "intelligence." Subsequent work has shown that animals are rated as lacking in secondary emotions as well as lacking in higher cognitive powers, such as thinking, reasoning, planning, and deciding (N. Haslam, et al., 2008a). If infrahumanization by human uniqueness is likening an out-group to animals, then it is likely that likening the out-group to animals would also be expressed as attributing them with lower cognitive ability. So there is evidence that denial of humanness can be exhibited in both emotion and intelligence aspects of infrahumanization. However, no studies to date have analyzed the expression of infrahumanization in terms of language proficiency. Study 3 measured humanness attribution by both secondary emotions and by high level language use.

Language and discrimination. Much research has observed the correlation of non-standard language use and discrimination (Aroian, Norris, Patsdaughter, & Tran, 1998; Chen-Hayes, Chen, & Athar, 2000; Gouvier & Coon, 2002; Lippi-Green, 1997; Ng, 2007; Ramirez-Esparza, Gosling, Benet-Martinez, Potter, & Pennebaker, 2006; Yoo, Gee, & Takeuchi, 2009). This type of discrimination is called *linguicism* or *linguistic prejudice* (Lippi-Green, 1997). Discrimination based on linguistic competence is a type of discrimination that can be legally justified, (e.g., in job hiring where it can be conflated with low intelligence) but that can facilitate discrimination by

nation of origin, urbanization, culture, disability, and age (Gouvier & Coon, 2002; Lippi-Green, 1997; Ng, 2007).

A related term to linguicism is *standard language ideology* (Ramirez-Esparza, et al.), or bias toward an "idealized, homogenous spoken language" that is based on the spoken language of the upper middle class (Lippi-Green, 1997, p. 64). Deviations from standard language, such as accents, non-fluency and non-standard grammar are often associated with attributions of low intelligence, impropriety, illegality, social unacceptability, identification as "other," and marginalized humanness (Chen-Hayes, et al., 2000; Lippi-Green, 1997; Ng, 2007; Rahman, 2009). It is the identification as "other" and marginalized humanness that are particularly important for the present work.

As Lippi-Green (1997) argues, the value put on a form of "standard" language usage that contributes to the above perceptions is heavily reinforced in the social sphere in education, the media, and the corporate world. Findings regarding language discrimination are also significant because the process has been correlated with poor physical health outcomes for immigrants in the US (over and above outcomes caused by racial discrimination) (Yoo, et al., 2009) as well as poor mental health outcomes for soviet immigrants (Aroian, et al., 1998).

Research also shows that language is a way to define the group identity and that discrimination based on language may be facilitated by identification with a particular language group (Barker & Giles, 2004; Miller, 2010; Yzerbyt, Provost, & Corneille, 2005). According to the Ethnolinguistic Identity Theory, identity groups are created around standard vs. non-standard speakers. The standard speakers are granted a higher status than non-standard speakers (Giles & Coupland, 1991). Barker and Giles (2004) found that among English speaking Americans, group identity based on language had a positive relationship with support for policies excluding Spanish from official public

use. Yzerbyt et al. (2005) found that group categorizations translated into linguistic stereotypes which then elicited discrimination on warmth and competence. Importantly, these linguistic stereotypes and warmth and competence judgements were not held by a third party group. This suggests that groups with meaningful inter-group relationships perceive linguistic differences that may not objectively exist.

Taken together, the above published research suggests that language ability and use of standard language is grounds for social identification and social labeling in identity terms. Like any social identity, identification on the basis of language can result in discrimination. In fact, self-identification as a person with low-level language proficiency has been correlated with perceived discrimination (Aroian, et al., 1998). To the extent that perceived discrimination is a sign of discriminatory behavior or attitudes, the Aroian et al. (1998) study suggests that identification based on language can lead to discriminatory behavior towards an out-group. Study 3 involves the attribution of examples of both high and low language proficiency to in-group and out-group members. Following Leyens (2000b), Study 3 hypothesized that one way infrahumanization might be exhibited would be in attribution of low level language proficiency to the out-group and high level language proficiency to the in-group.

Study 3 Hypotheses

In Studies 1 and 2, infrahumanization was not observed using an emotion attribution measure. This is despite the fact that the studies assessed an inter-group context in which infrahumanization has been exhibited in countries outside of Australia. But it cannot be concluded definitively that infrahumanization was not occurring, only that it was not observed. The infrahumanization measure in Studies 1 and 2 was an explicit measure of primary and secondary emotion attribution used in much of the previous work in Europe. It could be the case that in Australia, and/or when dealing with certain groups, language and intelligence are the domains in which groups are

infrahumanized. Therefore, Study 3 includes a measure of language attribution, as well as of emotion attribution, to see if infrahumanization would be exhibited in either of these two domains of humanness. It is possible that perceptions of language proficiency may also include an element of perceived intelligence, the third uniquely human attribute, but Study 3 will only explicitly test language and emotion attribution.

Study 3 asked group members to read several brief statements of varying language competency (two high-level and two low-level) and attribute them to an in-group or out-group author. Participants then completed a section on primary and secondary emotion attribution for in-group or out-group members. As in previous studies, greater secondary emotions attributed to the in-group than the out-group would indicate infrahumanization of the out-group. With the new measure, attribution of high language proficiency to the in-group and low language proficiency to the out-group would also exhibit infrahumanization. According to the claim that humanness can be denied in any or all of the three domains (language, intelligence, secondary emotions), finding the infrahumanization pattern in either or both measures would indicate infrahumanization.

The first hypothesis was that participants identifying themselves as Brumbies (local rugby team) fans would infrahumanize the Waratahs (out-of-state team) fans on the emotion measure (H.3.1). Secondly, Brumbies fans were expected to infrahumanize Waratahs fans on the language measure by attributing to them less gifted language ability than the Brumbies fans (H.3.2). I specifically chose the sporting inter-group context in order to test the language attribution hypothesis. Many inter-group contexts (e.g., social class, nationality, disability, gender, race) have implicit stereotypes of language and intelligence (Chang & Demyan, 2007; Kanazawa & Kovar, 2004; Kleinfeld, 1973; Martens, Johns, Greenber, & Schimel, 2006; May, 2002; Petrasso, 2010; Spencer & Castano, 2007). Therefore, language based discrimination between

the two groups in those contexts could be either infrahumanization or stereotyping. It would not be possible to separate the two. I could not find published studies describing stereotypes based on language or intelligence for sports fans. Therefore, it is more likely that detecting differences in attribution of language competency between the sports fan groups would be indicating infrahumanization in particular, and not a general literacy stereotype.

Finally, I did not make a prediction regarding the correlation between the two measures. With no precedent in the previous literature, it was unclear whether to expect positive correlation between infrahumanization on the emotion attribution measure and infrahumanization on the language proficiency measure. If the measures were positively correlated, this would indicate that infrahumanization is generalized, and denial of humanness in one domain carries over to other domains. If the measures were not correlated, this would indicate that infrahumanization can occur in a single domain of humanness, and that infrahumanization cannot be fully assessed without measuring all three domains.

Methods

Fan Reviews Pilot

To create the language attribution section of the study, I conducted a pilot test of four reviews of a Brumbies vs. Waratahs match. Four researchers, not otherwise involved with this thesis, were asked to write a brief review of a two-minute clip of a Brumbies vs. Waratahs game. Two were asked to write at a high language proficiency level and two were asked to write at a low language proficiency level. All were asked to write the review to be as neutral and unbiased as possible between the two teams. These reviews were then pilot tested with a sample of 20 people. Participants were asked to rate each of the four reviews on language proficiency on a scale from 1 (low proficiency) to 7 (high proficiency). Language proficiency was defined in the

instructions of the pilot as "level of vocabulary, grammar, expression, figurative language, etc." Participants were also asked to "Please indicate on the scale if you think the writer was a fan of the Brumbies (1), neither team (4) or Waratahs (7)." This measure would indicate the extent to which the researchers were successful in writing unbiased reviews. It was essential that the reviews be unbiased so the attribution of reviews to fans of either team in the main study would be based on language, not bias in the review.

In the pilot, I needed to evaluate the level of language proficiency and the presence of bias of each review. I first evaluated level of language proficiency by t-tests between proficiency measures and the scale midpoint. I took the mean of the language proficiency ratings of the two high-level reviews (M=5.22, SD=1.13) and it was found to be significantly higher than the scale midpoint of four (t[19]=2.49, p<.05). I took the mean of the ratings of the two low-level reviews (M=2.42, SD=.86) and found them to be significantly lower than the scale midpoint (t[19]=3.23, p<.05). T-tests were conducted between the mean rating of each review and the overall mean of the bias measure (M=3.40) as a measure of whether the review was biased for either team. This was to test if any of the reviews were perceived as biased towards the Waratahs or the Brumbies. No significant differences were found for either of the two high level reviews (M_{high1}=3.00, t_{high1}[19]=.816, p>.05; M_{high2}=3.50, t_{high2}[19]=.204, p>.05) and the overall mean, or the two low level reviews (M_{low1}=3.33, t_{low1}[19]=.143, p>.05; M_{low2}=3.78, t_{low2}[19]=.776, p>.05) and the overall mean. The variance for the high level reviews was .74. The variance for the low level reviews was .42. Therefore, I concluded that all four reviews were rated at their intended level of language proficiency and as not favouring either team.

Participants

Data were collected from 232 participants (103 male, 127 female, 2 missing, average age 27.16). Data were gathered in two settings. One hundred, fifty participants were undergraduate students at Australian National University. These participants were recruited through an advertisement on their course website and they took part in the study for partial course credit. Eighty-two participants were spectators at a rugby match at Canberra Stadium in Canberra, ACT. Participants from this second sample were approached while waiting in their seats before the game and asked to fill out a 10 minute questionnaire in which they would rate game reviews written by rugby fans. Participation at the match was voluntary and participants in the spectator sample were not compensated.

Materials and Design

To analyze the data, a 2 (level of emotion: primary/secondary) x 2 (valence of emotion: primary/secondary) x 2 (language proficiency: high/low) x 2 (team rated: Brumbies/Waratahs) x 2(sample: student/game fan) ANOVA was run. Each participant was assigned to one of two between-participants conditions rating either the Brumbies or Waratahs on emotion scales. This and the sample were the two between-subjects variables. The remaining three variables of level of emotion, valence of emotion, and language proficiency were within-subjects. There were no effects based on the sample variable, so it was removed from the analysis and a new analysis was run.

The questionnaire contained six parts. Part 1 was a measure of identification with the Australian Capital Territory (ACT). The ACT is the territory represented by the Brumbies rugby team and residency in the territory would be a major factor in deciding to be a fan of the Brumbies as opposed to another team. The measure contained five items asking details of the participants' duration of residence, family history, and opinions of the ACT including, "Do you live in the ACT?" and "If yes,

how many years have you lived in Canberra?" While the set of questions was a measure of identification, I hoped that it would also act as a manipulation of identification with the ACT. The questions asked were designed to elicit identification. For example, I asked, "To what extent do you consider the ACT/Canberra to be "home?" as opposed to, "Where do you consider home to be?" The aim was that, even if participants did not follow rugby closely, they would be reminded that, as residents of the ACT, the Brumbies are "their" team, and this would enhance identification with the Brumbies.

Part 2 was the second identification measure, this time of identification as a fan of the Brumbies rugby team. Again the aim was to use the items to measure identification but also to enhance identification with the Brumbies. It asked participants questions on their game attendance, television viewing, enjoyment of the sport, and team allegiance. Questions included items such as, "How often do you watch rugby union on television?" and "If you had to choose a favourite rugby union team, would it be the ACT Brumbies?" Again, the aim was to enhance identification with the team through directive questioning.

Part 3 began with a short description of the Brumbies' successful history as a club. This was designed to evoke pride in the team and increase identification. At this point, the methods between the two samples varied slightly. Participants from the university sample watched a short video clip of highlights of a rugby game between their home team, the Brumbies, and a rival team, the Waratahs. The clip showed the home team (Brumbies) scoring several tries. The video was used to make salient the sport context and again, enhance identification as a fan. In the stadium sample, participants were not shown the clip. However, their attendance at the Brumbies match (awaiting the match to begin, often dressed in Brumbies team colours) was expected to

create equally (if not greater) salient fan identification as the ANU sample who watched the video clip.

Part 4 presented the four fan reviews described above, and questions for the language attribution variable. Participants were told that fans of both the Brumbies and the Waratahs were asked to write unbiased, impartial reviews of a game between the Brumbies and the Waratahs. University sample fans were told the game was specifically the portion of the match they had just viewed. All participants were then told that it was their job to see if they could detect of which team the writer was a fan through any implicit bias in the reviews. Participants were then asked to read what was ostensibly a selection of four of these reviews. After each review, they were asked to answer two questions concerning the authorship of the review. The first question asked them to rate "Which team did the writer prefer?" on a 7 point scale from 1 (a Brumbies fan), to 7 (a Waratahs fan). Participants were then given a forced-choice question that asked, "If you had to choose, would you say the writer was a fan of?" and then they were asked to circle if the author was a Brumbies or Waratahs fan. This forced choice question was included in case participants chose the scale midpoint of four in the first question. In this section, the order of presentation of the four reviews were counterbalanced in a 4-way Latin square design.

Part 5 contained the measures for the between-subjects (team rated: Brumbies/Waratahs) emotion attribution variable. Fans were asked to picture a fan of the Brumbies (Waratahs). They were given a list of two sets (one positive and one negative) of 10 emotions. Emotions were selected for valence and level based upon the work of Demoulin et al. (2004a). There were five primary positive, five primary negative, five secondary positive and five secondary negative emotions. For the 10 positive emotions, participants were asked to rate the extent to which they believed the emotions would be felt by a fan of the Brumbies (Waratahs) when their team wins a

match, on a scale from 1 (just a little) through 7 (quite a lot). For the 10 negative emotions, participants were asked to rate the extent to which they believed the emotions would be felt by a fan of the Brumbies (Waratahs) when their team loses a match, also on a scale of 1 (just a little) through 7 (quite a lot). Presentation of the positive and negative emotion sets were counterbalanced. Finally, in Part 6, each participant was asked several demographic questions including sex and age. When they had finished the questionnaire, participants were thanked and debriefed on the purpose of the study.

Table 7.1
Study 3, 20 emotion words used in questionnaire with mean valence (MV)

Positive		Negative	
Primary	Secondary	Primary	Secondary
pleasure	optimism	pain	humiliation
affection	hope	suffering	shame
enjoyment	passion	anger	resentment
excitement	elation	irritation	disgust
happiness	joy	sadness	disenchantment
MV- 6.54	MV- 6.1	MV- 2.21	MV- 2.23

Results

One hundred forty participants (71 male, 69 female, mean age 29.09) from both samples nominated their favourite team as "Brumbies" when asked in Part 2 of the study. Only these participants were included in the analysis so that all participants included were identifying with the Brumby fan in-group. Of these, 69 rated emotions for Brumbies fans and 71 rated emotions for Waratahs fans.

Emotion Ratings

I first created a variable of fan identification that would separate the sample into high identifiers and low identifiers with the Brumbies team. I chose to base this on the ratings on the question "Compared with other teams, how much do you like the ACT Brumbies?" I did a median split, with scores above the median considered high identifiers and scores below the median considered low identifiers.

A 5-way mixed ANOVA was conducted with team rated, sample, and identification as the between-subjects variables and level of emotion and valence of emotion as within-subjects variables. There were no significant effects of the sample variable so it was removed and the 4-way mixed ANOVA was run.

There was a main effect for emotion level, with primary emotions (M=5.02, SD=0.99) attributed more overall to both groups than secondary emotions (M=4.59, SD=.094), $F(1,136)=64.38$, $p<.001$. There was a main effect for valence, with positive emotions (M=5.83, SD=0.94) being ascribed more to both groups than negative emotions (M=3.78, SD=1.41), $F(1,136)=225.78$, $p<.001$. There was also a two-way interaction effect for emotion valence by emotion level $F(1,136)=12.36$, p=.001. There was a very small difference between positive primary (M=5.95, SD=1.06) and positive secondary emotions (M=5.71, SD=1.06), but higher ratings of negative primary (M=4.09, SD=1.42) than negative secondary emotions (M=3.48, SD=1.54).

In the emotion measure, there was no support for the hypothesis that Brumbies fans would infrahumanize Waratahs fans. There was a significant two-way interaction between level of emotion and team rated, but the pattern was opposite to what would have indicated infrahumanization, $F(1,136)= 4.18$, $p<.05$. Figure 7.1 shows this interaction pattern. Whereas Waratahs fans were attributed slightly less primary emotions (M=4.99, SD=1.42) than Brumbies fans (M=5.04, SD=1.42), they were attributed more secondary emotions (M=4.68, SD=1.30) than Brumbies fans (M=4.51, SD=1.30). There were no further effects for emotion ratings, including the identification variable.

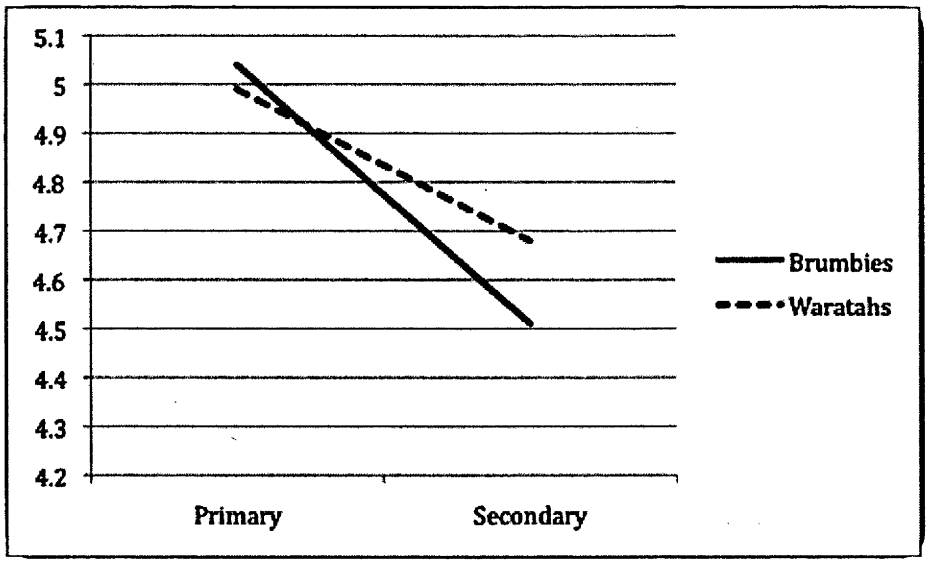

Figure 7.1. Two-way group by level interaction that is opposite of infrahumanization with less secondary emotions attributed to the in-group than the out-group.

Language Ratings

To analyse the ratings of the high and low language proficiency fan reviews, I created a variable for language proficiency that reflected to which team participants attributed the combined two high level reviews and to which team they attributed the combined two low level reviews. To do this, I took the mean ratings for the two high level reviews as ratings of high proficiency and the mean for the two low level reviews as low proficiency. As a reminder, ratings of 1 were attributions of the review to a Brumbies fan and ratings of 7 were attributions to a Waratahs fan. Correlations between the high level reviews were significant (r= .18, p<.01), however, correlations for the two low level reviews were not (r=.11, p>.05). Certainly the lack of correlation between the two low level reviews is problematic, and the analysis of the data must take this into consideration. Importantly, neither of the low-level reviews correlated with either of the high-level reviews. Therefore, I went ahead with the data we had gathered, and conducted a 2 (fan identification: high/low) x 2 (language proficiency: high/low) mixed ANOVA with fan identification as between-subjects and language proficiency reviews as within-subjects.

There was a main effect for language proficiency, with low level proficiency (M=3.67, SD=1.18) being rated higher (Waratahs) than high level proficiency reviews (M=2.93, SD=1.18), $F(1, 138) = 28.83$, $p<.001$. This means that, overall, low level reviews were attributed more towards the Waratahs and high level reviews were attributed more towards the Brumbies. This overall finding indicates that the sample (who all rated the Brumbies as their favourite team) attributed high level language to in-group fans and low level language to out-group fans. As this is effect shows differentiation between the in-group and out-group on a humanness dimension (language), I consider this effect to be infrahumanization based on language proficiency.

The two-way interaction of fan identification and language proficiency was marginally significant, $F(1,138)=3.03$, $p=.08$. The level of fan identification marginally interacted with language proficiency attributions in a way that would suggest high identifiers exhibited more infrahumanization. There was no difference in the low level reviews between high-identifiers (M=3.69, SD=1.65) and low identifiers (M=3.65, SD=1.77). But for high language proficiency reviews, high identifiers rated high level reviews lower (more towards the Brumbies) (M=2.72, SD=1.65) than low identifiers (M=3.15, SD=1.65).

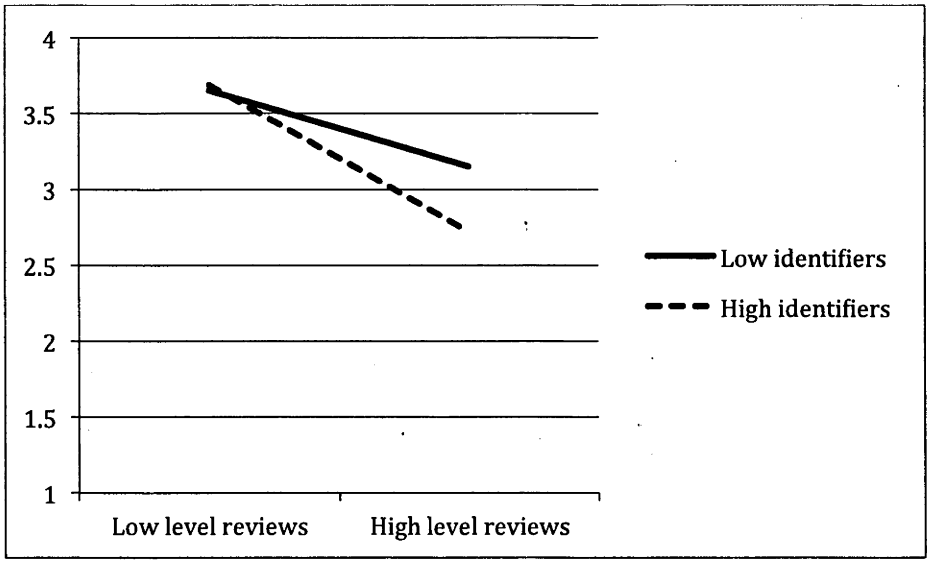

Figure 7.2. Identification by proficiency attribution interaction showing low identifiers attributing high-level reviews more to the out-group and high identifiers attributing high level reviews more to the in-group.

Discussion

Infrahumanization by Emotion Attribution

As in Studies 1 and 2, in Study 3 there was not an infrahumanization effect between the in-group and the out-group in the emotion dimension of humanness. Instead, the pattern observed was lower levels of attributions of secondary (uniquely human) emotions to the in-group than to the out-group. Therefore H.3.1 was not supported. There are several possibilities of why this was the case.

While two previously published studies have observed infrahumanization in a sporting fan context, in both cases, the team contexts were also international. Gaunt et al. (2005) sampled Belgian fans in which the in-group was Belgian fans and the out-group was Turkish fans. Martin et al. (2008) sampled Scottish children in which Scottish fans as the in-group and English fans as the out-group. It may be that results in these studies were picking up more on the inter-group context of ethnicity and nationality, rather than competing sports teams. In that sense, these studies did not use a different inter-group context than those in the bulk of the literature, which, as I have observed, mostly find infrahumanization in an inter-group context of nationality or

ethnicity. Therefore, in those two studies, infrahumanization may not have been observed in a sporting context, but rather in another international context. In retrospect, I may not have been really replicating the inter-group context used in the above two sports studies as I had intended.

Another possibility comes from the work of Gaunt et al. (2005). In that study, the researchers first measured Belgians' ratings of Turkish and Belgian fans immediately after a match, and then three days later. Immediately after the game, the ratings of the two sets of fans did not differ on secondary emotions. Therefore, they did not observe infrahumanization in the sampling directly after the emotional event.

An infrahumanization pattern did emerge when participants were asked to rate the emotions that in-group and out-group fans would experience three days *after* the game. Therefore, infrahumanization was observed when there was distance from the key emotional event. Participants were thus likely to be able to imagine that an out-group would experience secondary emotion immediately after an important event. However, they did not attribute those uniquely human emotions to the out-group under less emotional circumstances. The instructions in the present study were to imagine the emotions of the in-group or out-group "when their team wins(loses) a match." It is possible that participants in Study 3 could imagine out-group members experiencing secondary emotions in the context of an emotion generating match. It is unknown if their ratings of the out-group outside of the context of an emotional event would indicate infrahumanization.

Another possible explanation for the results observed in Studies 1-3 is that, while I believe that infrahumanization is likely to be common to most, if not all cultures, perhaps the mechanisms by which it is experienced are not. That is, maybe in Australia, infrahumanization is not exhibited in the implicit attribution of primary and

secondary emotions. Perhaps it is exhibited in other ways such as attribution of language and competence.

The final possibility, which was mentioned in Studies 1 and 2, is that the inter-group contexts used in Studies 1-3 did not have the necessary conditions for infrahumanization to occur. However, this explanation cannot be verified as the exact conditions that are necessary to elicit infrahumanization have yet to be identified in the literature.

Infrahumanization by Language Attribution

As this is the first time that language has been measured as an indicator of infrahumanization, there was no precedent for an operational definition of infrahumanization with this measure. For this study, I defined infrahumanization as a greater attribution of high level language ability to the in-group than the out-group. According to this definition, analysis of participants' ratings of the fan reviews show that infrahumanization was occurring in terms of language attribution. There was an overall main effect in which the in-group was attributed higher language skills than the out-group. There was also a marginal interaction effect in which participants identifying highly as Brumbies fans attributed higher language skills to the in-group relative to the out-group to a greater extent than did lower identifying participants. To the extent that language is considered an aspect that makes humans unique from animals, these findings suggest denial of the Waratah fans out-group equal humanness relative to in-group Brumbies fans by in-group members. Therefore, H.3.2 was supported.

However, because other studies have not measured infrahumanization in more than one domain of humanness (secondary emotions, language, and competence) there is not a precedent for when there is greater attribution of humanness to the in-group in only one domain but not another. Should this also be considered infrahumanization?

Again, I would argue that infrahumanization in any domain of humanness is an indicator that infrahumanization is occurring, as it has been described as the *subtle* denial of humanness to an out-group compared with an in-group (Vaes, et al., 2003).

However, this poses a methodological challenge. If the measures of humanness by emotion and language are not necessarily correlated, this indicates that infrahumanization can occur in a single domain of humanness. In Study 3, this was observed in that infrahumanization occurred in one domain of humanness (language) and not another (emotion). It could be argued, then, that in measuring infrahumanization, it cannot be concluded that infrahumanization is not occurring without measuring all three domains of humanness. Indeed, the point has been made that all aspects of humanness are necessary and none is sufficient to grant full humanness to a human group (Vaes, et al., 2003). If this is the case, then the results of Studies 1 and 2 cannot rule out the possible expression of infrahumanization because they only measured infrahumanization in one dimension. This issue has not been addressed in the literature because nearly all of the published work has found the effect with the emotion attribution measure. Therefore, the denial of humanness in one dimension was sufficient to claim infrahumanization had occurred.

But the present study raises the question, if three measures are required to eliminate the possibility that infrahumanization is being expressed, to what extent is either of those three measures meaningful or informative? Instead, as infrahumanization has only been measured thus far in terms of uniquely human emotions, perhaps it cannot be claimed as a measure of humanness more generally. I see this as a relevant question for the field, but not one that could reasonably be addressed in this thesis. Therefore, in Study 4, I returned to measuring infrahumanization in emotion attribution and did not continue with measurement of

language attribution. I focused on trying to find the infrahumanization effect by emotion attribution in an Australian sample.

Conclusion

After gathering data from the first three studies, I had the opportunity to present this work at an international conference with Jacques-Philippe Leyens and other infrahumanization researchers as attendees. I presented possible reasons why I had not been able to find infrahumanization in the three contexts in Australia including those mentioned above.

It was pointed out by the audience at that conference that the measures used in my studies were similar to those used in some of the previous studies but different to others. While this research had participants rate emotions with continuous data on a scale from 1 to 7, some of the previous work had asked participants to select emotions from a list. That is, the data were categorical and, rather than being rated on a scale, emotion words were either selected or not selected. It was recommended to try altering my measurement techniques to include selection techniques before making any conclusions about the reasons for the lack of finding the effect.

I considered this suggestion in designing my next study. I returned to the literature and confirmed that I had chosen the rating task based on previous work that had used rating scales of emotions to measure infrahumanization (Castano & Giner-Sorolla, 2006; Cehajic, et al., 2009; Costello & Hodson, 2010; Cuddy, et al., 2007b; DeLuca-McLean & Castano, 2009; Demoulin, et al., 2008; Gaunt, et al., 2005; Martin, et al., 2008; Vaes & Paladino, 2010b). Still, I took the suggestion on measurement issues into Study 4.

Study 4 again tests the infrahumanization effect with emotion attribution, but this time using both rating and selection measures. I did not expect to find differences between the two measures because the literature had found the effect with both

measures. But I included both measures for two reasons. Firstly, I thought it would help my research to be received better by an international audience and reviewers. Secondly, I thought it important to evaluate the potential outcome that the two measures would yield different results. If the effect was so sensitive as to only be detected by one measure and not another, it would not reflect well on the robustness of the effect or on the measurement tools most commonly used.

Study 4

Previously published research on infrahumanization has consistently detected infrahumanization by secondary emotion attribution, both in explicit and implicit measures. The work of this thesis began with a goal of expanding the understanding of the necessary and sufficient conditions needed to evoke infrahumanization. The aim was to measure infrahumanization with inter-group contexts including, but not limited to, nationality and ethnicity, which have been the focus of most published studies (Castano & Giner-Sorolla, 2006; Cortes, et al., 2005; Demoulin, et al., 2004b; Leyens, et al., 2001; Vaes, et al., 2003). I expected that infrahumanization would be observed in similar inter-group contexts in an Australian sample, and that this might help to distinguish conditions necessary for infrahumanization to occur. However, the first three studies of this thesis, that used similar and novel group contexts, and similar methods, did not detect infrahumanization.

While the findings of these studies were not anticipated, the consistency of this finding across three studies with three different inter-group contexts is an interesting effect in itself. At this point, there are three questions to be answered in the thesis. The first is whether infrahumanization by secondary emotion attribution occurs with an Australian sample. The second is whether infrahumanization by emotion attribution occurs outside of nationality and ethnicity in any country. This had support in

Demoulin et al. (2009a) but it should be replicated. Finally, the third was, what are the necessary and sufficient conditions needed to induce infrahumanization?

It is clear that the inter-group contexts used in Studies 1-3 were lacking the necessary and sufficient conditions to elicit infrahumanization by emotion attribution. But there was still the question of what the inter-group contexts were lacking, despite being seemingly similar to those used in past research. It was apparent that it was not merely the inter-group categories that were influencing infrahumanization. If that were the case then at least Study 1 or 2, which replicated the category of nationality used in previous research, should have revealed infrahumanization. Therefore, I hypothesize that it is the specific characteristics or *meanings* attached to the group that influence infrahumanization. That is, group members do not infrahumanize an out-group based on the category alone. If that were true, I would have observed infrahumanization in a nationality context. Rather, they infrahumanize on the basis of the meaning of the category in context.

So, infrahumanization could be based on the characteristics of the inter-group relationship such as identity and conflict, as has been hypothesized. But there has not been much success in analyzing these necessary and sufficient conditions in past published research. A third possibility is that it is the meanings made of the inter-group relationship that elicit an infrahumanization response to the out-group. That is, a complex interplay of the history, the current status of the inter-group relationship, and also the interplay of the characteristics of the nature of the relationship affect infrahumanization. So, for one group it might be a position of low power mixed with high economic threat that causes infrahumanization. For another group it might be a high status position, low threat, low conflict but a history of high prejudice. The picture that is, thus, beginning to form of infrahumanization is that there is a complex interplay

of inter-group characteristics that affect a group's view of the humanness of a relevant out-group.

Study 4 continued to look for an inter-group context that would evoke infrahumanization by secondary emotion attribution in an Australian sample. While it was somewhat informative to find inter-group contexts that do not induce infrahumanization, as in Studies 1-3, it was unclear in these studies exactly what element of the meanings made out of the inter-group context which was lacking. The goal in Study 4 was still to find an inter-group context in which infrahumanization would occur, so that this context and the meanings attached to it could be further analysed for what aspects were necessary for infrahumanization to occur.

Study 4 manipulated two inter-group characteristics: the nationality and morality of the target. It also used a context in which the in-group and out-group were in competition with each other. The study was conducted during the week following the closing ceremony of the 2008 Olympic Games in Beijing, China. The two targets who were being rated were either an Australian or Russian Olympic swimmer who had either competed morally or immorally by using or abstaining from use of performance enhancing drugs. The timing of the study was chosen to be synchronized with the completion of the Olympics. This was an attempt to make the inter-group context of competing athletes from the participant's own nation and another nation particularly salient. The study was also conducted during the 2008 conflict between Georgia and Russia, where the Australian government and many Western foreign powers were sympathetic to Georgia. For this reason, Russia was picked for the out-group nationality, again to increase a sense of inter-group conflict.

Nationality had provided the basis of an inter-group context in Studies 1 and 2. The characteristic of the inter-group context which was unique to this study was the element of morality of the target. Both theoretical and experimental evidence suggest

that the lack of perceived morality of an out-group results in reduced perception of that out-group's humanness. Theoretically, as was previously described in the section on moral exclusion, placing an out-group outside of one's moral community results in the ability to discriminate against, and in other ways mistreat, the out-group (Opotow, 1990, 1995, 2001b). Infrahumanization has been shown to excuse such mistreatment (Castano, 2008; Castano & Giner-Sorolla, 2006). And according to Haslam (2006), those who commit immoral acts are placed outside of our moral circle and dehumanized.

Experimentally, Esses, Veenvliet, Hodson and Mihic (2008) find that to the degree to which a group is described as immoral by violating proper procedures, members are more likely to be seen as less human. In a study of the morality of animals, it was only those animals that are used for food that were placed outside the realm of moral concern (Loughnan, Haslam, & Bastian, 2010) This further shows that groups that are not in people's larger moral group are those that can be mistreated compared to groups that are inside the moral group. Based on this research, morality or lack of morality can be seen as one particular characteristic of the inter-group context that might affect the way an out-group would be treated, specifically due to its humanness. I hypothesized that perceived immorality of the out-group might be one factor that determines whether an out-group is infrahumanized or not. Therefore, Study 4 created a group context that highlighted morality as a distinguishing factor by providing details of an athlete's moral or immoral behaviour relating to use of illegal performance enhancing drugs.

While, in the first two studies of this thesis, nationality as an inter-group context had not provided sufficient conditions to cause infrahumanization of the out-group in the Australian context, it was again included in Study 4 for two reasons. First, the nationality context has been used in much of the previous work on infrahumanization.

The fact that nationality, as an inter-group context, did not result in infrahumanization in Studies 1 and 2 suggests that the particular inter-group contexts I had chosen do not cause infrahumanization. But while any form of nationality itself may not be a sufficient inter-group relationship, there are many specific inter-group relationships based on nationality, and I had only tested one – Australians and immigrants. Indeed, there is incredible variability between the ways the histories between nations have shaped their current relationships. It is likely that there is some element(s) of the *meaning* of some specific nationality inter-group contexts that cause infrahumanization including implied morality, ethnocentrism, history of violence, current and past conflicts, degree of similarity of language or culture and others.

The second reason for using a nationality-based inter-group context was that previous research has shown that high in-group identification increases infrahumanization of an out-group (Demoulin, et al., 2004b). Because Study 4 used an Olympic context at a time when the Olympics had just finished, I suspected that, in this particular case, participants would highly identify with their nationality, perhaps more than at other times. Then, this increased identification might create conditions in that would evoke infrahumanization

The study employed a 2 (nationality: Australian/Russian) x 2 (morality: moral/ immoral) x 2 (emotion level: secondary/primary) x 2 (emotion valence: positive/negative) mixed design. Nationality and morality were between-subjects variables and emotion level and valence were within-subjects variables. The design was intended to create four (two by two) group contexts. Nationality is clearly a variable that creates an inter-group context. Based on the above research of Esses et al. (2008) and Loughnan et al. (2010), morality of the target was used as another inter-group context. That is, it was expected that a participant would perceive morality as a group

variable and identify with a moral "in-group" and see the target as either a fellow in-group member of an out-group member depending on his moral or immoral behaviour.

Hypotheses

The infrahumanization hypothesis for this study was informed by the Crossed-Categorization Model (Crisp, Hewstone, & Cairns, 2001; Crisp, Walsh, & Hewstone, 2006). The Crossed-Categorization Model gives insight into what patterns of inter-group behaviour will occur when a target is both an in-group member by one categorization and an out-group member by another. In Study 4, participants were presented with two inter-group contexts of nationality and morality. In the vocabulary of the Crossed Categorization Model, participants either read about a double in-group member, one of two "mixed" group members, or a double out-group member. The double in-group member was the moral Australian. The mixed group members were the immoral Australian and the moral Russian athlete. The double out-group member was the immoral Russian athlete.

Research is unclear on whether crossed-categorization of an out-group member (out-group by a single categorization, out-group by two categorizations, or an out-group by one and not another categorization) affects in-group bias. Indeed studies have been inconsistent in showing that multiple categorization reduces discrimination (Crisp, Hewstone, & Rubin, 2001). One study that claims to overcome the methodological problems of previous studies found that there was bias against all three types of out-groups described above, but the strongest bias against the double out-group (Crisp, Hewstone, & Rubin, 2001). This suggests that crossed-categorization does not reduce intergroup bias relative to simple categorization. In regards to Study 4, these findings suggest that the double out-group (immoral Russian) has the greatest chance of being infrahumanized.

Regarding how crossed categorized group members will be seen, according to the model, positive affect, common categorization, and low perceived importance of the groups can moderate out-group bias and lead to mixed category members being judged in the same way as double in-group members (Crisp, et al., 2006). This informs Study 4 in that if participants were experiencing positive affect and/or low perceived importance of the out-groups, I would expect no infrahumanization of the mixed group.

Another aspect of the crossed categorization research that is informative to Study 4 is that categorizations can be either superordinate (e.g., race, gender, ethnicity, nationality) or subordinate (e.g., occupation, age, hobbies, personal tastes). In the case that there is a superordinate and a subordinate identity, superordinate categorizations have been found to be more likely to influence attitudes towards crossed categorized targets (Crisp, Hewstone, & Cairns, 2001). In the case of crossed categorizations of two superordinate categorizations, Crisp et al. (2001) found that only double out-group members were treated as out-group members. Mixed members were treated as in-group members.

As is evident in the above research, cross-categorization creates complex intergroup relationships. Based on the findings of Crisp et al. (2001), I hypothesized that in conditions in which a participant was rating the target who was an out-group member by both nationality and morality, the target would be infrahumanized (attributed with the least secondary emotions) (H.4.1). Making a hypothesis for the two conditions in which the target could be classified as an in-group member in one sense and an out-group member in another was more difficult. These groups were the Russian moral athlete and the Australian immoral athlete. For these conditions, it was unclear whether a cross-categorized group member would be infrahumanized. I could not predict affect or importance of the two social categories, two factors that have been shown to reduce intergroup bias for cross-categorized targets. For this reason, I made

no prediction for the crossed-categories. I predicted that the double-in-group member would not be infrahumanized (H.4.2)

Methods

Participants

Two hundred, twenty-three participants were sampled (76 men, 143 women), with a mean age of 19.61. Participants were first year students at Australian National University who completed the questionnaire as part of an in-class laboratory lesson. Completing the questionnaire was part of class activity, but returning the survey to the researcher was voluntary. The questionnaire took approximately 15 minutes to complete. Afterwards, the participants were fully debriefed and the study was discussed in detail as part of the lesson.

Materials

Participants were given a questionnaire containing six parts. Part 1 included two measures, one of Australian identity and one of identification with moral values. The Australian identification measure included five items and was adapted from Doosje et al. (1995) ($\alpha = .95$). Example items are: "I see myself as an Australian" and "I am pleased to be an Australian." Participants responded on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The identification with moral values measure had six items and measured participants' beliefs about cheating, specifically in reference to the Olympics ($\alpha = .83$). It included measures such as, "Players who seek unfair advantage are violating the spirit of the games" and "Cheating is just another way of trying one's best" (reverse coded). Responses were also indicated on a 7-point Likert scale with responses from 1 (strongly agree) to 7 (strongly disagree).

Part 2 provided the manipulation for the study. Information was presented as a screen capture of a CNN.com article about a 2004 Olympic athlete. Participants read that an Olympic swimmer from the 2004 games had recently come forward to tell the

International Olympic Committee (IOC) about his experience with performance enhancing drugs. The content had been manipulated for four conditions for the 2 (athlete's nationality: Russian, Australian) x 2 (morality: moral, immoral) design. Half of participants in each of the country conditions read about a Russian swimmer, half read about an Australian swimmer. Half of participants read about an athlete who made a moral decision, half read about an athlete who made an immoral decision. In the immoral condition, the athlete said he knew taking performance enhancing drugs was a violation of IOC rules, but that winning was more important than fairness, and that he took the drugs. He was quoted as saying, "I knew it would be a violation [of IOC rules] but what was most important to me was winning. I place that above everything else." In the moral condition, the athlete reported that playing a fair game was most important, and he did not take the drugs. He was quoted as saying, "I knew it was a violation [of IOC rules] and what was most important to me was playing a fair game. I place that above everything else." Part 3 was a free-response manipulation check that asked students to describe the article, specifically the nationality of the swimmer and the decision he had made regarding performance enhancing drugs.

Part 4 included two measures of emotion attribution to the Olympic athlete described after he made his decision to use/not use performance enhancing drugs. Two separate emotion measures were included at the suggestion of other researchers (in conversation) as previously described. So, Part 4 was divided into two sub-parts, each one with a different measure of emotions. Level and valence classification of the emotions was based on Demoulin et al. (2004a) as in previous studies. In this study, I used 40 emotion words, more than in previous studies. This methodological change was made to increase the opportunity to measure infrahumanization by providing more emotion words on which to make judgment. I took the 20 most primary and 20 most secondary emotions from the list provided by Demoulin et al. (2004a). Part A of the

present study gave a list of 40 emotions, and asked participants to circle emotions that they thought best described the feelings of the athlete. According to instructions used in previous research, participants were instructed to choose as many emotions as they liked, but to "try not to pick too many" (Leyens, et al., 2001). Part B again presented the list of 40 emotions and asked participants to rate on a 7-point scale the degree to which the athlete felt each from 1 (not at all) to 7 (extremely). The emotion rating task in Part A was recommended by infrahumanization colleagues and replicated methods in some published work (Paladino, et al., 2004). The emotion rating task of Part B was the measure used in Studies 1-3 and in some other experiments that had found infrahumanization (Castano & Giner-Sorolla, 2006; Cehajic, et al., 2009; Costello & Hodson, 2010; Cuddy, et al., 2007b; DeLuca-McLean & Castano, 2009; Demoulin, et al., 2008; Gaunt, et al., 2005; Martin, et al., 2008; Tam, et al., 2007; Vaes & Paladino, 2010b).

Part 5 included items measuring demographics, attitudes towards the Olympics, and another set of manipulation checks. The attitudes towards the Olympics measure included three items ($\alpha = .93$) and asked participants to rate on a scale from 1 (none at all) to 7 (very much), "How much interest do you have in the Olympics," "How much to you enjoy watching the Olympics?" and "During the two weeks of the Olympics, how often do you watch the games?"

The manipulation checks assessed participants' understanding of the key variables. The first question asked, "What country is the Athlete from?" with the possible responses "Australia" and "Russia". The second question asked, "Did the athlete decide to take performance enhancing drugs?" with the possible responses of "yes" and "no." The final manipulation check was, "Is the use of performance enhancing drugs cheating?" with the possible responses "yes" and "no."

Demographic questions included country of birth, citizenship, and country supported in the Olympics. These questions were asked because they were crucial components of the inter-group context. Participants not supporting Australia in the Olympics needed to be removed from the analysis because the study assumed the participants would be part of the Australian in-group. It was assumed that, in an Olympic context, participants that did not support Australia in the Olympics would not see Australians as their in-group.

Results

Three participants were excluded from analysis because they failed one of two manipulation checks of the details of the experiment. Sixty participants were excluded on the basis that they did not support Australia in the Olympic games and therefore would not see the Austalian in-group target as an in-group member. Therefore, there was a total of 160 participants (52 men, 108 women, mean age of 19.47).

Emotion Ratings

To analyze the emotion attribution and rating tasks, I took the mean of ratings for the emotions in each emotion category. Emotions contained within the four within subjects factors were primary positive (surprise, pleasure, affection, attraction, excitement, enjoyment, caring, calmness), primary negative (pain, fear, panic, fright, scariness, suffering, anger, fury, irritation, affliction, sadness, distress), secondary positive (love, elation, passion, sympathy, admiration, repentance, hope, nostalgia, optimism), and secondary negative (melancholy, disconsolate, disenchantment, gloomy, disgust, resentment, shame, remorse, embarrassment, guilt, humiliation).

The first analysis was a 2 (nationality: Australian/Russian) x 2 (morality: moral/ immoral) x 2 (emotion level: secondary/primary) x 2 (emotion valence: positive/negative) mixed ANOVA, with nationality and morality as between-subjects

factors and emotion level and emotion valence as within-subjects factors. Emotion variables were created by grouping emotions as described above.

There was a main effect for level of emotion rated, $F(1,156) = 54.21, p < .001$. More secondary emotions ($M = 3.17$, $SD = .65$) were attributed to targets in general than primary emotions ($M = 2.89$, $SD = .62$). There was also a main effect for valence of emotion rated ($F(1,156) = 35.77, p < .001$), with participants attributing more negative emotions ($M = 3.35$, $SD = .09$) than positive emotions ($M = 2.71$, $SD = .07$) overall. These patterns are different from Study 3, which had the opposite effects. This is probably the result of the situational context being more serious and concerning legal issues rather than playing rugby.

There was an interaction between valence of emotion and morality of the target, $F(1,156) = 32.38, p < .001$. Negative emotions ($M = 3.80$, $SD = .125$) were attributed to a greater degree, and positive ($M = 2.57$, $SD = .10$) emotions were attributed to a lesser degree to the immoral target. For the moral target, positive ($M = 2.89$, $SD = .13$) emotions were attributed to a slightly greater degree than negative ($M = 2.86$, $SD = .10$) emotions. I think, again, the effect was probably based on the circumstances in which the target was placed. The immoral target was publicly confessing to a crime and, therefore, was circumstantially likely to experience negative emotions to a greater extent than the target publicly denying having committed a crime. Likewise, the target who admitted to having committed a crime would experience positive emotions to a lesser extent than the target who publicly denied having committed a crime.

There was also a three-way interaction of level of emotions, valence of emotions, and morality of the target, $F(1,156) = 5.46, p < .05$ shown in Figure 7.3. This pattern is infrahumanization qualified by valence. While the moral target was attributed positive secondary emotions ($M = 2.95$, $SD = .09$) to a slightly greater degree than the immoral target ($M = 2.71$, $SD = .09$), the immoral target was attributed negative

secondary emotions (M =3.83, SD =.12) to a greater degree than the moral target (M =2.77, SD =.12). For the primary emotions, the immoral target was also attributed negative emotions (M = 3.49, SD =.11) to a greater degree than the moral target (M =2.65, SD =.11) and the moral target (M =2.66, SD =.10) to a greater degree than the immoral target (M =2.44, SD =.10) for positive emotions.

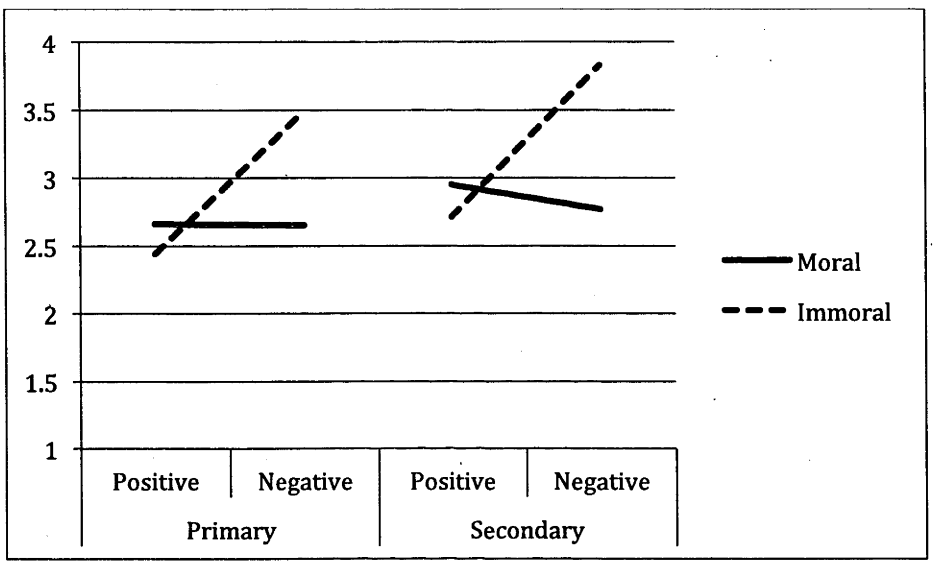

Figure 7.3. Three-way interaction of morality, level and valence of emotion showing humanization of the out-group in negative secondary emotions.

As with previous studies in this thesis, the level of emotion by inter-group context interactions were non-significant. There was no level by morality of target interaction that would show infrahumanization in emotion rating measures for the immoral targets compared to the moral targets. (H.4.1).

There were no significant effects based on the nationality of the target (H.4.1).

Additional analyses were conducted including level of Australian identity of the participant, and level of identity as moral to see if an infrahumanization effect would emerge with identification taken into account. Identification as an Australian was calculated with participants scoring above the median on the five national identification measures considered high identifiers and participants scoring below the median considered low identifiers. Identification with morality was calculated with participants

scoring above the median on the six morality measures considered high identifiers and participants scoring below the median considered low identifiers.

I wanted to see if level of identification would have an effect on infrahumanization. I analyzed the emotion variables in a 2 (Australian identity: high/low) x 2 (moral identity: high/low) x 2 (nationality: Australian/Russian) x 2 (morality: moral/ immoral) x 2 (emotion level: secondary/primary) x 2 (emotion valence: positive/negative) mixed ANOVA with Australian identity, moral identity, nationality and morality as between-subjects factors and emotion level and valence as within-subjects factors. Results showed that there were no effects of infrahumanization for the emotion ratings measure with level of moral identity or nationality identity included in the analysis.

Emotion Selection

For assessing the emotion selection task, the analysis was again a 2 (nationality: Australian/Russian) x 2 (morality: moral/ immoral) x 2 (emotion level: secondary/primary) x 2 (emotion valence: positive/negative) mixed ANOVA, with nationality and morality as between-subjects factors and emotion level and valence as within-subjects factors. I first created four variables for the emotion selection variables. Emotion variables were scored as selection = 1 and non-selection = 0. I took the mean of the emotion selection values for emotions in each of the four categories described above. Emotion category values were the mean of each category and values were between 0 and 1. This was the process used by Paladino et al. (2004).

For the emotion selection task, there were both similarities and differences with the results of the emotion rating task. There was a main effect for emotion level in which more secondary emotions ($M = .18$, $SD = .01$) were attributed than primary emotions ($M = .13$, $SD = .01$), $F(1,156) = 13.94$, $p < .001$. However, there was not a main effect for emotion valence as there was in the emotion rating task.

There was the same interaction between emotion valence and morality, $F(1,156) = 5.77$ $p < .05$, as with the emotion rating task. Similar numbers of emotions were attributed to the moral target for positive ($M = .17$, $SD = .02$) and negative emotions ($M = .16$, $SD = .02$) and to the immoral targets for negative emotions ($M = .17$, $SD = .01$). However, the immoral target was attributed significantly less positive emotions ($M = .10$, $SD = .01$). This could, again, be the result of the circumstance of the immoral target having just confessed to a crime.

Finally, there was, again, a three-way interaction between level of emotion, valence of emotion, and morality of the target, $F(1,156) = 16.04$, $p < .001$, shown in Figure 7.4. The above valence by morality effect was being driven by the secondary emotions for the immoral target. The immoral target was attributed slightly more positive and negative (M_{pos}=.18, SD=.03; M_{neg}=.11, SD=.01) primary emotions than the moral target (M_{pos}=.15, SD=.03; M_{neg}=.08, SD=.01). For secondary emotions, the moral in-group was attributed more positive emotions (M_{pos}=.20, SD=.02) than the immoral out-group (M_{pos}=.14, SD=.02) but the immoral out-group was attributed more negative secondary emotions (M_{neg}=.24, SD=.02) than the moral in-group (M_{neg}=.13, SD=.02). This is the opposite of the infrahumanization effect.

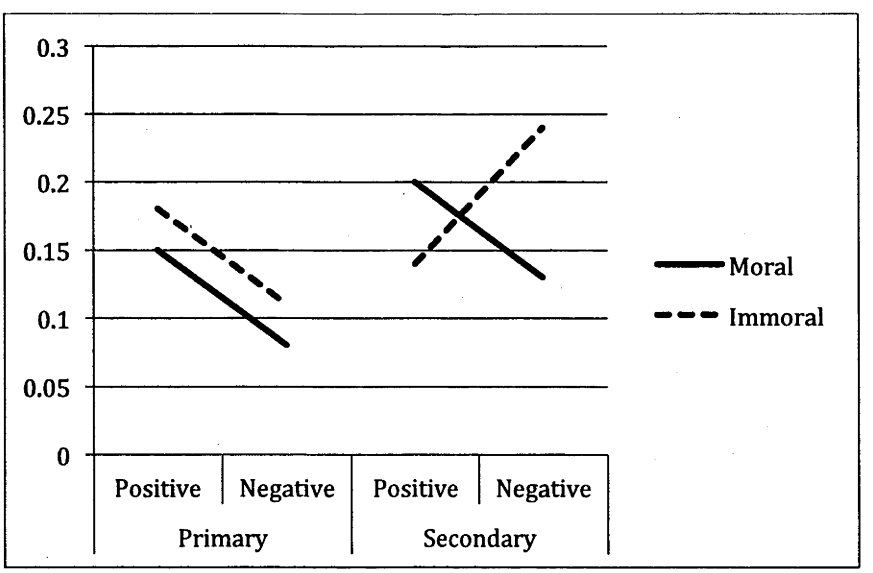

Figure 7.4. Three way morality by level by valence interaction for emotion selection showing humanization of the immoral out-group in negative secondary emotions.

As with the emotion rating task, there was no morality by level of emotion interaction. With the emotion selection task, there were, again, no significant effects based on the nationality of the target.

Again, levels of identification with nationality and morality were included in an analysis. Identification variables were the same as before, calculated with participants scoring above the median on the nationality and morality scales considered high identifiers and participants scoring below the median considered low identifiers. This analysis was a 2 (Australian identity: high/low) x 2 (moral identity: high/low) x 2 (nationality: Australian/Russian) x 2 (morality: moral/ immoral) x 2 (emotion level: secondary/primary) x 2 (emotion valence: positive/negative) mixed ANOVA with Australian identity, moral identity, nationality and morality as between-subjects factors and emotion level and valence as within-subjects factors.

There was one interaction of level of moral identification (as indicated by the averaged six-item measure of moral identification) with valence and morality of the target, $F(1,156) = 5.76, p < .05$. This interaction shows that the valence by morality interaction was driven by high moral identifiers. In this interaction, low moral identifiers attributed more positive emotions to both the moral (M_{pos}=.14, SD=.03; M_{neg}=.10, SD=.02) and the immoral (M_{pos}=.17, SD=.03; M_{neg}=.14, SD=.02) target. Only the high moral identifiers differentiated the immoral target on valence of emotion, attributing more negative emotion to the immoral target (M_{pos}=.15, SD=.03; M_{neg}=.21, SD=.02) and attributing more positive than negative emotions to the moral target (M_{pos}=.21, SD=.03; M_{neg}=.11, SD=.02). This shows more in-group favouritism by the high identifiers.

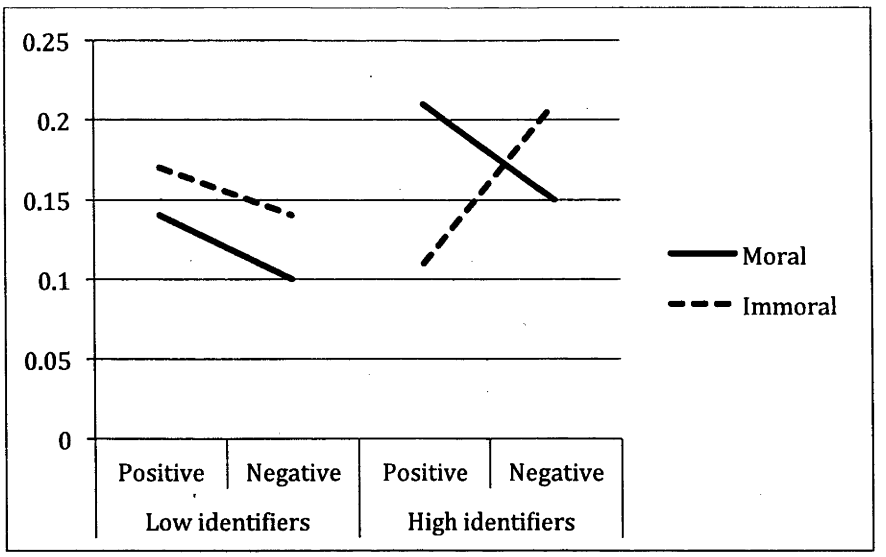

Figure 7.5. Moral identification by morality of target by valence of emotion for emotion selection. High identifiers attribute more positive emotions to the in-group and more negative emotions to the out-group, whereas low identifiers do not differentiate.

Discussion

Infrahumanization

The study included two types of emotion attribution tasks that have been used in the literature: ratings and selection. In both of these tasks, I obtained results that did *not* indicate infrahumanization for either of the two group identities: nationality or morality. Neither nationality of the target nor morality of the target interacted with level of emotion attributed to the target in either of the two emotion measures. Therefore, neither the immoral nor the Russian targets were infrahumanized by emotion attribution.

It is unclear why this was the case. One possibility is that the results were due to the way the manipulation and the emotion attribution tasks were phrased. The manipulation was that the target had committed a moral or immoral act and was admitting to it in a public forum. The task asked participants to select emotions that they believed the target felt after making the decision to use or not use the performance enhancing drugs. It could be that, like in Study 3, the target could be attributed

secondary emotions after an emotional event, but would not be attributed them in general.

The other possible explanation of the results is that they suggest that immorality attributed to an out-group is not a facet of the inter-group relationship that would be sufficient to cause infrahumanization. I cannot argue from the current data that enhanced immorality of the out-group may increase infrahumanization. It is possible that the morality manipulation in this study was not sufficient, or that there were other factors of the inter-group context that precluded infrahumanization such as admiration for Olympians. But there were two manipulation checks asking "Did the athlete use performance enhancing drugs?" and "Is the use of performance enhancing drugs cheating?" and all participants included in the analysis responded in the affirmative to these questions. So I can argue from the current data that knowledge of out-group immorality alone is not always a sufficient element of the inter-group relationship to cause the in-group to infrahumanize the out-group[14].

I, also, did not observe infrahumanization in the nationality inter-group context. The mean of the identification as an Australian was 5.89, which is well above the scale midpoint of 4, suggesting that national identity was salient for the Australian participants in an Olympic context. Therefore, the data from this study, as well as Studies 1 and 2, suggest that difference in nationality in itself is also not a sufficient inter-group context for causing infrahumanization. Although infrahumanization has been frequently observed in contexts of differences in nationality, it seems that it is not

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[14] In a re-analysis of the study, a methodological error becomes apparent. The morality variable was manipulated on an inter-personal level, rather than inter-group. The literature clearly characterizes infrahumanization as an intergroup process rather than interpersonal, and what is true of interpersonal processes often does not hold true for intergroup processes and vice versa. Haslam, Bain, Douge, Lee, and Bastian (2005) have found interpersonal denial of human nature traits, but not human uniqueness traits. Indeed, if the participants in Study 4 had denied humanness qualities to the immoral target, there would not have been sufficient evidence to claim that an immoral out-group had been infrahumanized. However, as there was no significant interaction between attribution of emotions and the manipulation of morality or nationality, no such claims were made. So while this is a weakness of Study 4, the results of the study are not problematic for the overall message of the thesis.

nationality in itself that is the key variable. Rather it is likely to be the meaning made of that inter-group context which causes infrahumanization. That is, it is likely to be the particular inter-group characteristics that coincide with nationality that are driving the observed nationality group with infrahumanization interaction. It may be that given crossed categorization, morality was a more relevant inter-group context for discrimination as it was one in which the desire to positively differentiate (though not with infrahumanization, but with in-group favouritism) was higher than for the nationality inter-group context.

In-group Favouritism

There was an interaction of valence and the morality identity of the target for both measures. When all 40 emotions were rated, there were more negative emotions attributed to the immoral (out-group) target than the moral (in-group) target and more positive emotions attributed to the moral target than the immoral target. Likewise, when emotions were selected from a list, there were more positive emotions attributed to the moral (in-group) target than the immoral (out-group) target. This result can be interpreted as in-group favouritism, with positive emotions being attributed to the in-group and negative emotions being attributed to the out-group.

At the same time, the result could also be attributed to the circumstances of the article written about the immoral target and the moral target and the differences in their experiences. The immoral target was admitting to having committed a crime, while the moral target was publicly revealing an honourable decision. Attributing negative emotions to the athlete who may be feeling ashamed and positive emotions to the athlete who may be feeling proud does not necessarily indicate in-group favouritism. However, there was some indication of in-group favouritism when the moral identification measure was taken into account. High identifiers showed a pattern of in-group favouritism whereas the low identifiers did not. Therefore, while the results of

the valence by morality interactions are not necessarily in-group favouritism, the results can still support a claim that, despite not observing infrahumanization, some inter-group processes were at work.

Emotion Measures

In this study, two measures of emotion attribution were used to assess the extent to which primary and secondary emotions were attributed to the in-group and the out-group. They have both been used in previous research that found an infrahumanization pattern of emotion attribution. Theoretically, these measures are measuring the same dimensions of in-group and out-group emotions. However, the effects found for each of these measures did not completely map on to each other. The results were the same for a main effect for emotion level, an interaction of emotion valence and morality, and a three-way interaction of emotion valence, morality, and emotion level. There were also no effects found on either measure for nationality. However, one effect (main effect for emotion valence) was found in the rating task and not in the selection task, and one effect (identification by emotion valence by morality) was found in the selection task and not the rating task. Overall, the measures were very similar in their descriptions of emotion attribution between the groups. Importantly, the results were the same for the infrahumanization interaction.

There was not a level by group rated interaction in either measure that would indicate infrahumanization in this study (i.e., morality of target by level of emotion or nationality of target by level of emotion). So in this study, both measures found no infrahumanization. However, the differences in other effects for the two measures (i.e., no main effect for emotion valence and no morality by level of emotion interaction) suggest that the measures are not always equivalent. It is possible that a study using both measures of emotion attribution would find infrahumanization for one measure and not the other. What would that result indicate for infrahumanization? If an effect is not

sufficiently robust to be apparent in two similar measures, does it exist? Are the measures able to be used interchangeably? To attempt to investigate these questions further, Study 5 used both emotion rating and emotion selection tasks again.

Study 5

In previous studies, I have not seen a consistent pattern of emotion attribution indicating infrahumanization on both positive and negative secondary emotions with various inter-group contexts. Studies 3 and 4 particularly used inter-group contexts in which competition and conflict were elements, as inter-group conflict has been suspected to increase infrahumanization (Castano, Paladino, Coull, & Yzerbyt, 2002). However, infrahumanization was not found in these inter-group contexts. Study 5 had several important goals for the thesis. First, in Study 5, I made one more attempt at creating an inter-group context that would elicit infrahumanization in an Australian context. I, again, increased the conflictual nature and strength of identification of the inter-group relationship. I believed that the lack of observation of infrahumanization in Studies 1-4 was not due to infrahumanization not being present in an Australian sample, but rather not being present in the particular inter-group contexts created within the study. I still did not feel that I could make any conclusions regarding the nature of infrahumanization, other than that it is dependent on the meanings made of the inter-group context rather than the type of context itself. Still, the meanings and conditions necessary were unclear.

Study 5 used a group context that is known to have both high levels of group identification and high levels of inter-group competition. Participants were members of a residential college or "hall" (i.e. dorm) on the Australian National University campus called Bruce Hall. The out-group invoked was members of a different ANU campus college, John's College. The two colleges have a history of rivalry in both official

interhall activities such as sports and arts competitions as well as unofficial interactions that will be described below.

Each year, the halls compete in several sports competitions, such as distance running and orienteering, rugby, soccer, and softball. Arts competitions include choral and instrumental concerts, art shows, and theatre. With such a varied set of skills needed, a large portion of the residents are involved in these competitions. Throughout the academic year, points are allocated to each hall and at the end of the year one hall is awarded the winner of the interhall "shield."

Off the sports field, there is little contact between the halls. Students mostly create friendship groups within their own hall, eat meals within their hall, and have holiday celebrations and events within the hall. Around campus, students wear shirts, pullovers, and other identifying clothing to show that they represent their university hall. Members of opposing halls even engage in antagonistic "drive by" behaviour in which students will honk their car horns and yell insults in front of the opposing hall's building. It is evident from this behaviour that many students identify highly with their hall and feel competition or even conflict with the opposing hall. Though there are other halls on campus, the most predominant rivalry is between John's College and Bruce Hall.

Similar to previous studies, Study 5 investigates perceptions of members of an out-group (Johns College residents) and an in-group by members of the in-group (Bruce Hall residents) in primary and secondary emotions in order to detect infrahumanization of the out-group. Using this inter-group context was important to the program of research in that it provided a different type of inter-group context. In Studies 1, 2, and 4, the groups were not ones that are necessarily relevant to participants in their daily lives as university students. This inter-hall group was one with which they are faced on a daily basis. It was less abstract than those in previous studies of the thesis. It was a

final attempt to analyze infrahumanization in the same way as previous published studies, with the assumption that it was possible to measure infrahumanization in an Australian sample with uniquely human emotions.

While I still was testing the same hypotheses as Studies 1-4, I was less confident that I would find infrahumanization (based on previous results). For this reason, I included an additional element in Study 5. In this study, human nature traits and human uniqueness traits were also assessed as indicators of humanness attribution.

As described in the chapter on topics related to infrahumanization (Chapter 4), it has been found that human nature (HN) and human uniqueness (HU) traits are two additional indicators of the perceived humanness of an out-group (N. Haslam & Bain, 2007; N. Haslam, et al., 2005; N. Haslam & Loughnan, 2008b; N. Haslam, et al., 2008c). While HU traits indicate perceived likeness to animals, HN traits indicate perceived likeness to automata (Loughnan & Haslam, 2007). It has also been found that HN traits and HU traits are often not both attributed in the same pattern to a group. That is, a group may not be granted or denied both HN and HU. Rather, the two types of traits can be attributed in a strategic or complimentary pattern, acknowledging certain strengths of the out-group while denying other traits (Bain, et al., 2009; Loughnan & Haslam, 2007). This demonstrates that the two are, indeed, separate constructs. For this reason, denial of HU is infrahumanization (comparison of humans with animals) and denial of HN is mechanistic dehumanization (comparison of humans with automata.)

While previous studies in the literature and this thesis have assessed infrahumanization by emotion attribution, measurement of HN and HU are not a complete departure. There are similarities between HN and HU measures and the secondary emotion attribution measures. Secondary emotions are an element of HU. Therefore, HU, but not HN, was being assessed in Studies 1-4. Study 5 assessed HU with emotion attribution and trait attribution as well as HN by trait attribution. Using

the HN trait measures was important in this study because of the particular characteristics of the groups involved. Johns College is a formidable competitor with Bruce Hall, often winning inter-hall competitions. For this reason, I expected that while Bruce Hall residents may not liken their out-group competitor to animals, with inferior mental capacity, moral sensibility, rationality, logic, and maturity. They may, instead, liken them to automata, with inferior emotional responsiveness, individuality, depth, and interpersonal warmth (N. Haslam, 2006). Hypothesis 1 (H.5.1) was that Bruce Hall residents would infrahumanize or dehumanize Johns College residents by one or a combination of humanness dimensions including secondary emotions, HU traits, and/or HN traits.

As with previous studies, Study 5 measured identification with the in-group. Identification is hypothesized to have a positive relationship with infrahumanization (Demoulin, et al., 2009b; Demoulin, et al., 2004b). Study 5 also attempted a quasi-manipulation of identification within a longitudinal design. Participants included only first year residents. The questionnaire was first administered in orientation week to first year students who had only just arrived at Bruce Hall. This was intended to be a point of low identification. The second data collection period was seven weeks later when the students had had the opportunity to engage in interhall activities and become familiarized with inter-hall and intra-hall culture. Hypothesis 2 (H.5.2) was that participants would infrahumanize the out-group more at Time 2 than at Time 1 because of a positive correlation between identification and infrahumanization (Demoulin, et al., 2004b; Leyens, et al., 2001; Rohmann, et al., 2009) and the prediction that identification would be greater at time two.

Additional variables measured were perceived competition and point allocation. I included point allocation as an additional measure of in-group favouritism. As in

Study 2, I wanted to show that, in the absence of infrahumanization, other inter-group processes may still occur.

Hypothesis 3 (H.5.3) was that infrahumanization would correlate positively with in-group bias by point allocation, and with competition. Regarding competition, it is yet unclear whether conflict is a factor contributing to infrahumanization, but there is some evidence that it is, and I suspect competition contains a conflict of interest.

Methods

Participants

Participants were 84 residents of Bruce Hall, a residential college on Australian National University campus. Thirty students participated at both Time 1 and Time 2. Participants were all first year residents of the hall. The majority of students had only been living in hall for one week at Time 1, but some had lived in hall for a semester. Their mean time in hall at Time 1 was less than one month ($M = 3.83$ weeks, $SD = 6.65$).

Design and Procedure

The study was a 2 (hall rated: Bruce –in-group/Johns-out-group) x 2 (emotion level: primary/secondary) x 2 (emotion valence: positive/negative) x 2 (time: 1 / 2) mixed design. Hall rated, emotion level, and emotion valence were within-participants. This was the first study in this thesis in which the group rated was a within subjects variable. Theoretically, a within participants design is preferable, as detecting infrahumanization would indicate that, on average, individuals were attributing more secondary emotions to the in-group than the out-group. However, I initially thought that the demand characteristics of the study in a within-participants design would inhibit differentiation on the measures of in-group and out-group. That is, I thought that when faced with an in-group measure of emotion followed by an out-group measure of the same emotions (or vice versa) participants would be sensitive to prejudice and want to

rate the groups equally. However when I went back to the literature, I realized that studies had used both between-subjects (Cuddy, et al., 2007b) (DeLuca-McLean & Castano, 2009; Leyens, et al., 2001) and within-subjects (Demoulin, et al., 2009b; Gaunt, 2009; Gaunt, et al., 2002; Leyens, et al., 2001; Marcu & Chryssochoou, 2005) designs and had found infrahumanization in both types. Therefore, I decided to change to a within-participants design in Study 5.

The time variable was within participants for a subset of 30 participants and between participants for the remaining 54. Analyses were run once with time as a between –subjects and once as within-subjects, as the Results section will explain. Residents were first asked to participate (Time 1) during orientation week, before classes had started in the first semester of 2009. This week is a time when students have just arrived to campus, and the week is spent acquainting them with the hall and helping them meet fellow residents. Orientation week is before interhall activities such as sports and arts competitions have begun. Time 2 was in the 7th week of the semester. By this time, the halls had engaged in several competitions of sports and arts events, the most recent being a major orienteering and running race that had happened in the weekend just prior to data collection. At both times, participants were approached within the hall cafeteria at mealtimes. The questionnaire took approximately 30 minutes to complete and participants were given $5 for their participation.

Materials

Participants first completed a 14-item identity measure to evaluate their identification with Bruce Hall (α = .90). Items were adapted from Leach et al. (2008), and included such items as "I think Bruce Hall residents have a lot to be proud of" and "Being a Bruce Hall resident is an important part of how I see myself." Participants responded by choosing a number from a 7-point Likert scale anchored with "strongly disagree" and "strongly agree".

Next, participants completed a 40-item emotion evaluation measure asking, "To what extent do you think Bruce residents (or Johns residents) experience the following emotions?" on a scale from 1(very little) to 7 (very much). The same 40 emotion words were used as in Study 4.

The presentation of the emotion scales were counterbalanced so that half of participants were evaluating Bruce residents (in-group) first and half of participants were rating Johns residents (out-group) first. The order of emotions on the list was not counterbalanced, but the set order of the list was generated randomly.

After each emotion rating task, participants were asked to go back and "circle the emotions that you think best describe the feelings of Bruce (Johns) residents". Similar to instructions given in previously published studies, participants were told "You may circle whatever number you like, but try not to pick too many" (Leyens, et al., 2001). Because of the slight differences in the results from the two emotion measures in Study 4, I included both measures in Study 5.

Participants then completed a 40-item measure of HN and HU traits. They were asked to indicate on a 7-point Likert scale to what extent they agreed that Bruce (and Johns) residents had each of the 40 traits, anchored with "strongly disagree" to "strongly agree." Twenty of the traits were high in HN and 20 of the traits were high in HU, according to work done by Haslam and Bain (2007) and Haslam, Bain, Douge, Lee, and Bastian (2005). Based on this study, traits were categorized into eight within-subjects factors by high and low human uniqueness, high and low human nature, and rating of Bruce and Johns. High HU/high HN traits were ambitious, analytic, imaginative, passionate, sympathetic, frivolous, high strung, insecure, irresponsible, and reserved. High HU/ low HN traits were broadminded, conscientious, humble, polite, thorough, disorganized, hard-hearted, ignorant, rude, and stingy. Low HU/ high HN traits were active, curious, friendly, helpful, fun-loving, impatient, impulsive, jealous

nervous and shy. Low HU/low HN traits were contented, comfortable, even-tempered, relaxed, selfless, passive, simple-minded, timid, uncooperative, and unemotional.

This was followed by a nine-item measure of feelings of competition between the two halls. It included such items as, "Deep down, I really like it when Bruce residents beat Johns residents at some activity" and "The fact is, any win by Johns is a loss for Bruce."

The next measure was a 10-item point-allocation task as used in Bornstein et al. (1983). Each item presented participants with seven allocation options. In each item, the allocation options had different values, but points were structured according to each of three point structures. There were three options favouring the in-group, three options favouring the out-group, and one option of complete equality between the two groups. Scores were computed by taking an overall total for points allocated to the in-group and points allocated to the out-group. A last section asked participants for basic demographic information pertinent to the study, including first language, nationality, time spent living in hall, involvement in inter-hall competitions, and number of weeks/months/years spent attending university.

Results

Data were analysed in two ways because of the differences in participants at Times 1 and 2. The intention was to run the study as a longitudinal design with the same participants at Times 1 and 2. At Time 1 there were 54 participants and at Time 2 there were 60 participants. However, there were only 30 participants who participated at both Times 1 and 2. Results were first analysed such that only the 30 participants who participated at Times 1 and 2 were included, and analysis was run as a longitudinal design. Data were analysed using a repeated measures mixed ANOVA, with emotion level, emotion valence, traits, hall rated and time as within-subjects variables.

However, this analysis did not have sufficient power. Then the analysis was run with the full sample of 54 data points at Time 1 and 60 data points at Time 2. In this case, participants at Times 1 and 2 were treated as completely separate populations with time as a between-subjects variable[15]. Only the second analysis results will be reported below.

Emotion Ratings

To analyse the emotion rating tasks, emotions were grouped into eight categories to form within-subjects factors of primary positive (surprise, pleasure, affection, attraction, excitement, enjoyment, caring, calmness), primary negative (pain, fear, panic, fright, scariness, suffering, anger, fury, irritation, affliction, sadness, distress), secondary positive (love, elation, passion, sympathy, admiration, repentance, hope, nostalgia, optimism), and secondary negative (melancholy, disconsolate, disenchantment, gloomy, disgust, resentment, shame, remorse, embarrassment, guilt, humiliation) emotions. I calculated the mean ratings for each set of emotions. There were two sets of these four categorizations, one for ratings of Bruce residents and one for Johns residents. I then ran a four-way mixed ANOVA with level of emotion, valence of emotion, and hall rated as within-subjects variables and time as a between-subjects variable.

Main effects. In analysing the emotion rating task, there was a main effect for level of emotion ($F(1,112) = 38.85, p < .001$), with primary emotions ($M = 3.94$, $SD = .06$) being attributed to a greater extent than secondary emotions ($M = 3.78$, $SD = .06$)

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[15] In this analysis, the Time 1 and Time 2 samples are being analyzed as if they were independent, however, they are non-independent. Thirty people participated at both Time 1 and Time 2 and the remaining participants only participated at one time or the other. Conceptually, this means that some Time 2 participants had seen an identical survey 7 weeks earlier, and some had not. Statistically, this analysis adds error variance and in that way is conservative. This statistical complication would be a problem if the results were different to those of Studies 1-4 and infrahumanization was observed. However, this was not the case. Instead, the three-way group by level by valence interaction that was observed in Studies 1 and 4was observed again in Study 5. This suggests that the statistical concern is not a problem.

overall. There was also a main effect for valence ($F(1,112) = 268.56, p < .001$), with positive emotions ($M = 4.57$, $SD = .06$) being attributed to a greater extent than negative emotions ($M = 3.17$, $SD = .08$). The main effects for hall rated ($F(1,112) = 7.32, p < .01$) showed that emotions were attributed to Johns residents (out-group) ($M = 3.94$, $SD = .06$) to a greater extent overall than Bruce (in-group) residents ($M = 3.77$, $SD = .07$).

Interactions. There was no interaction of level of emotions and hall rated, the effect that would have indicated infrahumanization (H.5.1).

The main effect for valence was moderated by time ($F(1,112) = 5.74, p < .05$), such that there was a greater difference between attribution of positive and negative emotions at Time 2 ($M_{pos} = 4.64$, $SD = .08$; $M_{neg} = 3.00$, $SD = .12$) than Time 1 ($M_{pos} = 4.50$, $SD = .09$; $M_{neg} = 3.29$, $SD = .12$).

There was an interaction of emotion valence and emotion level ($F(1,112) = 25.42, p < .001$), such that there was a greater difference in attribution of positive and negative primary emotions ($M_{pos} = 4.75$, $SD = .06$; $M_{neg} = 3.14$, $SD = .09$) than secondary emotions ($M_{pos} = 4.42$, $SD = .07$; $M_{neg} = 3.12$, $SD = .09$).

Valence of emotions and hall rated interacted ($F(1,112) = 69.10, p < .001$), such that Bruce residents (in-group) were attributed with more positive ($M = 4.83$, $SD = .07$) emotions than Johns residents ($M = 4.27$, $SD = .09$), and Johns residents were attributed with more negative ($M = 3.57$, $SD = .12$) traits than Bruce residents ($M = 2.63$, $SD = .10$). This finding indicates in-group favouritism.

This last result was moderated by level of emotion ($F(1,112) = 7.69, p < .01$), again showing a group rated, by level of emotion by valence of emotion interaction, as seen in Figure 7.6. The two-way valence by hall rated interaction was stronger for primary ($M_{\text{Bruce positive}} = 5.12$, $SD = .08$; $M_{\text{Bruce negative}} = 2.65$, $SD = .11$; $M_{\text{Johns positive}} = 4.39$, $SD = .09$; $M_{\text{Johns negative}} = 3.63$, $SD = .13$) than secondary emotions ($M_{\text{Bruce positive}} =$

4.70, SD = .08; $M_{\text{Bruce negative}}$ = 2.65, SD =.10; $M_{\text{Johns positive}}$ = 4.15, SD = .09; $M_{\text{Johns negative}}$ = 3.58, SD = .12).

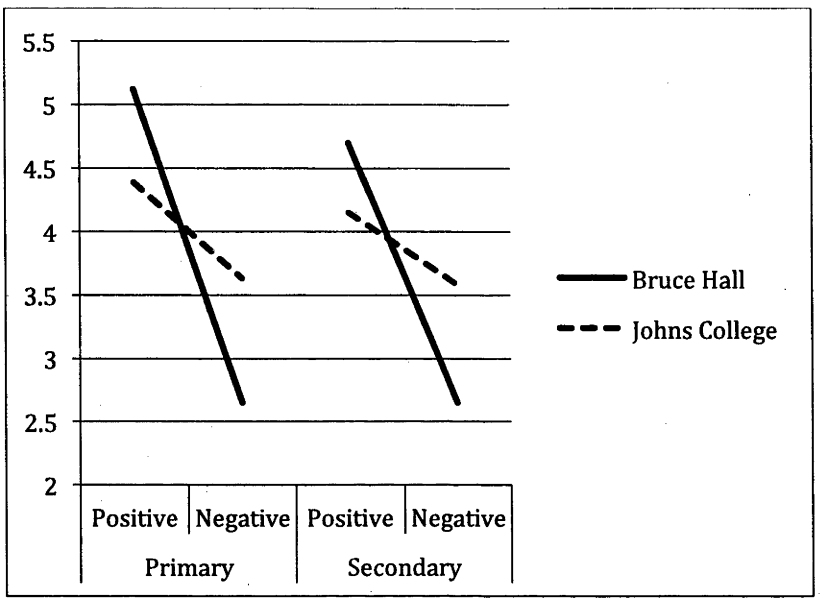

Figure 7.6. Hall rated by level by valence interaction for emotion ratings with a slightly larger in-group favouritism effect for primary than secondary emotions.

Emotion Selection

To analyse the emotion selection tasks, emotions were again grouped into eight categories to form within-subjects factors of primary positive, primary negative, secondary positive, and secondary negative emotions. Emotion variables were scored as selection = 1 and non-selection = 0. Emotion category values were the mean of each category and values were between 0 and 1. Again, there were two sets of these categorizations, one for ratings of Bruce residents and one for Johns residents. I, then, ran a four-way, mixed ANOVA with level of emotion, valence of emotion, and hall rated as within-subjects variables and time as a between-subjects variable. As in Study 4, there were both similarities and differences between emotion rating and selection measure effects.

Main effects. There was again a main effect for emotion level (F(1,112) = 29.72, p<.001), with participants attributing more primary emotions (M=.16, SD =.01) than secondary emotions (M=.12, SD =.01). The main effect for emotion valence

($F(1,112) = 194.59, p<.001$) again indicated that participants attributed more positive emotions (M=.24, SD =.02) than negative emotions (M=.04, SD =.01). In the main effect for hall rated ($F(1,112) = 27.97, p<.001$), the pattern was opposite to the emotion rating task. Participants attributed more emotions to Bruce residents (M=.15, SD =.01) than Johns residents (M=.13, SD =.01).

Interactions. Unlike emotion rating results, there was a significant interaction in emotion attribution between emotion level and hall rated (the interaction which would show infrahumanization); however it was opposite to that of infrahumanization, $F(1,112) = 5.58, p<.05$. While there were differences between the in-group ($M_{priBruce}$= .18, SD = .01) ($M_{secBruce}$ = .13, SD = .01) and out-group ($M_{priJohns}$ = .14, SD = .01)($M_{sec\ Johns}$ = .12, SD = .01), the effect was being driven by primary and not secondary emotions. The effect is shown in Figure 7.7. To signify infrahumanization, the effect would need to be driven by secondary emotions (Cortes, et al., 2005; Leyens, et al., 2007; Leyens, et al., 2000a). I looked to the three-way interaction for more information.

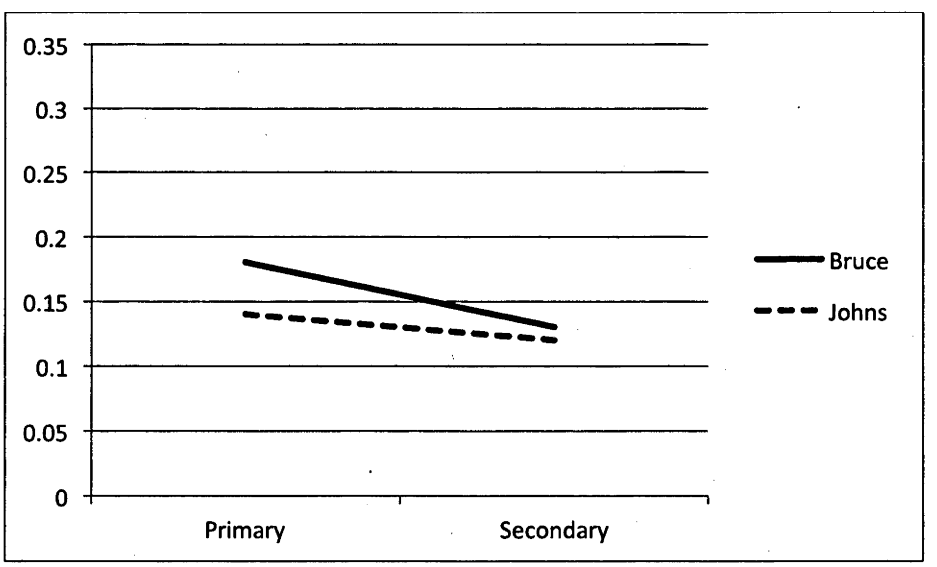

Figure 7.7. Two way hall rated by level interaction that does not follow the infrahumanization pattern.

There was again a three-way interaction between emotion level, emotion valence, and hall rated, $F(1,112) = 7.01, p<.01$. It showed that for, secondary emotions,

there was greater attribution to the in-group than the out-group for positive emotions (M_{Bruce} = .25, SD = .02; M_{Johns} = .17, SD = .02) but equal attribution for negative emotions (M_{Bruce} =.07, SD = .01; M_{Johns} = .07, SD = .01). For primary emotions there were more positive emotions attributed to the in-group (M = .32, SD = .02) than the out-group (M = .21, SD = .02), but less negative emotions attributed to the in-group (M = .02, SD =.01) than the out-group (M = .07, SD = .01).

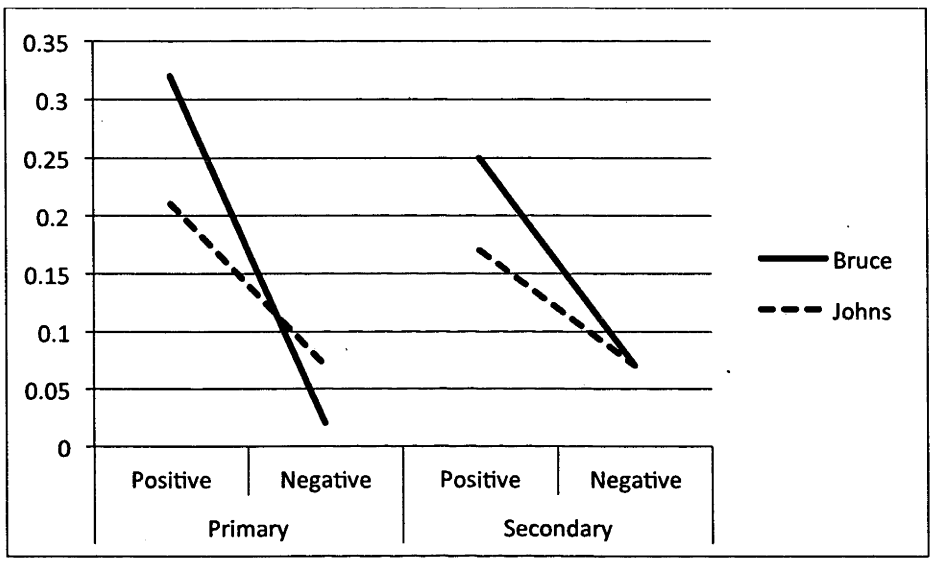

Figure 7.8. Three way hall rated by level by valence interaction. No difference in secondary positive emotions is different from the infrahumanization pattern of emotion attribution.

While the pattern of positive emotion attribution suggests infrahumanization, there is no difference in negative secondary emotions and the effect is driven by secondary emotions, which makes this pattern of emotion attribution different from how infrahumanization has been defined in the thesis. I have defined the infrahumanization pattern according to Leyens et al. (2001), who say that infrahumanization occurs only when there is a significantly greater attribution of both positively *and* negatively valenced secondary emotions to the in-group compared to the out-group and a smaller difference in primary emotions than secondary. This is not the pattern in either the two or the three-way interaction. Therefore, I conclude that because it is only positive

secondary emotions that are driving the relationship, the effect is more akin to in-group favouritism than infrahumanization.

There was again a two-way emotion level by emotion valence interaction ($F(1,112) = 21.43, p<.001$) in which there was a larger disparity between positive ($M = .27$, $SD = .02$) and negative ($M = .04$, $SD = .01$) emotions at the primary level than at the secondary level ($M_{pos} = .21$, $SD = .02$; $M_{neg} = .04$, $SD = .01$).

There was also again, the same two-way, hall rated by emotion valence interaction ($F(1,112) = 57.69, p<.001$), with more positive emotions attributed to the in-group ($M = .29$, $SD = .02$) than the out-group ($M = .19$, $SD = .01$), and more negative emotions attributed to the out-group ($M = .07$, $SD = .01$) than the in-group ($M = .01$, $SD = .01$). This pattern reveals in-group favouritism.

HU and HN Traits

Trait categorization. To analyse the trait attribution measures, traits were categorized into eight within-subjects factors by high and low human uniqueness, high and low HN, and rating of Bruce and Johns. Values were calculated by finding the mean of the trait ratings for each category. I, then, ran a five-way mixed ANOVA, with HN, HU, and hall rated as within-subjects variables and time and identification as between-subjects variables.

Main effects. There were main effects for HN traits ($F(1,110) = 178.81, p<.001$), and college rated ($F(1,110) = 10.81, p=.001$). More high HN traits ($M = 4.34$, $SD = .04$) were attributed than low ($M = 3.89$, $SD = .04$). There were overall more traits attributed to Bruce residents (in-group) ($M = 4.17$, $SD = .04$) than attributed to Johns residents (out-group) ($M = 4.06$, $SD = .04$).

Interactions. There was no interaction of HN by hall rated or HU by hall rated, which would have indicated infrahumanization.

The main effect of hall rated was moderated by an effect of time, $F(1,110)= 5.61, p < .05$. There was a greater difference in the overall degree of the traits attributed to the in-group and the out-group at Time 2 (M_{Bruce}=4.20, SD=.05; M_{Johns}=4.02, SD=.05) than Time 1 (M_{Bruce}= 4.12 SD=.06; M_{Johns}=4.10, SD=.06). This effect suggests that participants saw more pronounced inter-group differences when they had lived in hall for a longer period of time. There were no other effects from this analysis.

Additional Variables

The allocation variables were analyzed by creating an "allocation decision" variable by totaling the number of points allocated to the in-group and out-group over the seven items. I ran a two-way, mixed ANOVA on the dependent variable allocation decision with hall rated as a within-subjects variable and time as a between-subjects variable. There was a main effect for hall rated. Allocation decisions were in-group favouring overall ($F(1,112) = 44.43, p<.001$), with a Bruce resident (M= 392.09, SD=.07) being allocated more points than a Johns resident (M= 347.23 SD=.06). These allocation decisions did not vary over time.

Additional variables measured included identification and competition. Identification did increase significantly ($F(1,112) = 8.32, p < .01$) from Time 1 (M = 4.73, SD = .79) to Time 2 (M = 5.15, SD = .77). I predicted that identification would correlate positively with infrahumanization (H.5.2), but since there was no infrahumanization effect, I did not test this correlation. Competition also increased significantly ($F(1,112) = 4.40, p < .05$) between Time 1 (M = 3.97, SD = .97) and Time 2 (M = 4.35, SD = .98). Again, there was no infrahumanization effect, so I did not assess the correlation (H.5.3).

Discussion

Study 5 included three measures of infrahumanization. For emotion ratings, there was no hall rated by emotion level interaction. For emotion selection, there was a

hall rated by emotion level interaction, but this was driven by primary, not secondary emotions. There were no HN by hall rated interactions nor HU by hall rated interactions, that would have indicated infrahumanization. Therefore, to summarize, results of the three measures of humanness attribution (emotion rating, emotion selection and trait rating) revealed no significant results for infrahumanization.

Regarding the measures, emotion rating, emotion selection and the attribution of HU are all theoretically measures of HU (or the likening of humans to animals). However, these measures did not correspond on all effects. Table 7.1 shows the comparison of effects between the three measures. To summarize, emotion rating and emotion selection showed the same results for main effects for valence and hall rated and interaction effects for valence by level, valence by hall rated, and valence by level by hall rated. There were differences between the emotion ratings measure and the emotion selection measure on the hall-rated main effect and the valence by time effect. Most importantly, there were differences between the three measures on the infrahumanization measure of level by hall rated for emotion ratings and emotion selection, and HU by hall rated for the HU measure. These results are troubling, as measures that are theoretically the same are showing different effects. The results call into question the reliability of the measures as indicators of infrahumanization.

Table 7.2
Effects of uniquely human attribution on three measures - similarities and differnces.

Effect	Emotion Ratings	Emotion Selection	HU Rating
Level	same		n/a
Valence	same		n/a
Hall rated	more to Johns	more to Bruce	none
Infrahumanization	none	driven by primary	none
Valence by Time	difference at T2	none	n/a
Valence by Level	same		n/a
Valence by Hall Rated	same		n/a
Valence by Level by Hall	same		n/a

As has been the case with the previous studies in this thesis, results indicated in-group favouritism in several measures. In the emotion selection task there were greater positive emotions and less negative emotions attributed to the in-group than out-group at Time 2, compared to Time 1. In the emotion rating task, the negative emotions were attributed to the out-group to a greater degree and the positive emotions were attributed to the in-group to a greater degree. Results also showed in-group favouritism in allocation decisions in the point distribution task. These indicators of in-group favouritism suggest that the inter-group context was significant for the participants. Participants did see the differences between Bruce and Johns residents as meaningful and instrumental in making assessments and decisions. However, the inter-group context lacked the characteristic(s) necessary to cause the in-group to infrahumanize the out-group. While the inter-group context was adequate for discrimination between the groups, it was not sufficient to see the out-group as lacking humanity relative to the in-group.

Studies 3-5 Conclusions

Overall, for studies 3-5, I could say that the inter-group contexts that I examined did not have the characteristics necessary to cause in-group members to infrahumanize the out-group by emotion attribution. The inter-group contexts were grouped by sports team, nationality, morality, and university hall of residence. The relationships were characterized by varying degrees of competition and identification. While the inter-group contexts were not sufficient to cause infrahumanization, they were sufficient to cause in-group favouritism in each of the three studies. Therefore, there were some inter-group effects in the studies. This suggested that the absence of infrahumanization findings were not due to a failure to make meaningful and salient inter-group contexts. Studies 4 and 5 also raised issues calling into question the measurement techniques of

infrahumanization. In the next section, I will further analyse the results obtained so far and the pathway forward for the remaining studies.

Chapter 8: Regrouping and Reanalysis

At this point, it is clear that there is a difference in the outcome of the current studies and those reported in the majority of the literature on infrahumanization. Whereas previous literature had concluded that results were "unanimous" (Demoulin, et al., 2009a, p. 156) in finding that in-groups generally discriminate against an out-group on secondary emotions, the present work has not reached the same conclusion. In quite varied inter-group contexts, levels of conflict relations, and nature of inter-group differences, I have not seen the result of infrahumanization that would be expected based on much of the previous literature. This is despite careful methodological procedures in direct consultation with published authors, replicating three measurement procedures of the previous work.

To review, the inter-group contexts used so far were nationality, sexual orientation, sports team affiliation, moral standing, and university residence hall. The inter-group contexts introduced conditions of threat (both material and symbolic) and competition. Participants identified with their in-group. While infrahumanization by secondary emotion attribution was not found, infrahumanization by language attribution was found as well as in-group favouritism by emotion attribution, altruism, and resource distribution. While it is true that conflict is not necessary to finding infrahumanization (Leyens, 2009), the contexts created in the first five studies (sports teams, national groups, sexual orientation, differing moral ideologies) were similar to those of previous studies in which infrahumanization has been found (Castano & Giner-Sorolla, 2006; Cehajic, et al., 2009; Costello & Hodson, 2010; Cuddy, et al., 2007b; Demoulin, et al., 2008; Gaunt, et al., 2005; Martin, et al., 2008; Tam, et al., 2007). It is relevant to point out, then, several anomalies in the published research that are more similar to the pattern of results described in the current five studies. Two were introduced in Chapter 2, and

two were not published at the start of the thesis. They will be described in more detail below.

Infrahumanization Null Findings

Work by Marcu and Chryssochoou (2005) examined inter-group attitudes of the majority population towards Gypsies in Britain and Romania. The authors measured attribution of primary and secondary emotions of Gypsies by British and Romanian samples (Marcu & Chryssochoou, 2005). The study also included a measure of "ontologization," which is another measurement of the attribution of humanness. The authors describe ontologization as "an operation of classification by which one minority can be represented not only as an out-group, but can also be represented as outside the social map of human identity (2005, p. 44)." The authors hypothesized that they would see the infrahumanization effect in both inter-group contexts. Unexpectedly, the authors found that, while there was ontologization by both the British and Romanian samples, there was only infrahumanization by the British sample towards the Gypsies.

Firstly, they concluded from this that, perhaps, the distinction of in-group and out-group on the basis of primary and secondary emotions (infrahumanization) is not a good indicator of subtle dehumanization. This was because, although they observed ontologization (attribution of greater human culture to an in-group than an out-group), they did not observe infrahumanization by Romanians towards Gypsies. That is to say, infrahumanization, as it has been studied, may not be good indicator of subtle dehumanization. This was the first published study that I had read that reported not finding infrahumanization in an inter-group context, so it becomes important in interpreting the outcomes of my research. Indeed, it shows that I am not the only researcher to find that infrahumanization is not present in an inter-group relationship in which it was expected.

In another study, published during my PhD studies, Vaes, Heflick and Goldenberg (2010a, p. 756) studied how thoughts of death (mortality salience) affect humanness ratings (infrahumanization). They measured infrahumanization after inducing mortality salience. In their third study, Vaes et al. used a comparison of an American in-group and a British out-group. They did *not* find infrahumanization of the British out-group. In their analysis, this is explained by two factors. First, the lack of infrahumanization is attributed to the ratings of the groups being between participants and not within-participants. Because participants were only asked to rate either Americans or British, they did not compare the groups directly. However, as I have cited in previous chapters, other studies using a between-participants design for the inter-group variable *have* found infrahumanization (Cuddy, et al., 2007b; DeLuca-McLean & Castano, 2009; Leyens, et al., 2001). The other explanation is that Americans perceived the British as a high status, high competence out-group, and these are the least infrahumanized groups.

A third study by Bain, Park, Kwok, and Haslam (2009), also published during my PhD studies, used measures of human nature (HN) and human uniqueness (HU) traits to measure the various forms of subtle dehumanization. Secondary and primary emotion measures are said to measure the same aspects of humanness as assessed by HU traits. With Australian and Chinese samples, Bain et al. found that Australians did not deny Chinese HU traits relative to Australians in any of their three studies. That is, they did not subtly dehumanize the Chinese by infrahumanization. This study is important as it finds similar results to the present work, also within an Australian nationality context. The explanation by Bain et al. was that the in-group "does not always represent the sole epitome or ideal of humanness, or at least not on every dimension" (2009, p. 794). The authors also speculated that culturally, Australians do not feel superior to other groups in terms of HU, but do in terms of HN.

Finally, an unpublished study by Bain, Halsam and Kashima (2010) again did not observe infrahumanization by HU attribution with several nationality-based inter-group comparisons in an Australian context. Specifically, participants rated Australians, Britons, Indonesians, and Americans. Participants did not discriminate against any out-group on HU, but did attribute less HN to some out-groups. This result is similar to my HU and HN findings in Study 5.

Together, these studies provide four examples of findings similar to the ones in the current Studies 1-5 in which salient out-groups were not infrahumanized. The authors of each of these studies provide different reasons for why the in-group did not infrahumanize the out-group. One attributes the lack of infrahumanization to the specific inter-group context and the image of the out-group as high competence and high status (Vaes, et al., 2010a). The second explanation is that not all groups feel superior on all domains of humanness, and perhaps Australians do not feel superior in terms of HU (Bain, et al., 2009). Finally, a third explanation is more critical of the infrahumanization concept in general (Marcu & Chryssochoou, 2005). I will consider these explanations below.

The explanation that high status, high competence out-groups are not infrahumanized is not supported by previous research. For example, a study by Brown, Eller, Leeds, and Stace (2007) found that British state school students infrahumanized private school students, who are stereotyped as being both higher status and higher competence in relation to state school students. Furthermore, several authors have argued that status is not a necessary condition for creating infrahumanization, as they have also found infrahumanization of high status groups (Demoulin, et al., 2004b; Gaunt, 2009; Paladino, et al., 2002). Therefore, I agree with the comment that not all groups are infrahumanized, but not because of the status domain that the authors proposed.

Bain et al. (2009) propose an interesting hypothesis, that Australians do not infrahumanize by HU. I find this hypothesis intriguing given the history of Australia and that of the European countries. Human uniqueness is the attribution of civility, cultural maturity, and refinedness. Given that non-Aboriginal Australian society is relatively new compared with those of Europe or other Asian countries such as China, Australians may not feel superior in HU compared to other nations. However, Australians do pride themselves on being "salt of the earth" and traits more akin to human nature. And, as Bain et al. (2009) found, Australians do deny HN to out-groups. This hypothesis will be explored in Chapter 10, Study 7.

The third explanation of Marcu and Chryssouchoou (2005) is more critical of the infrahumanization concept and its measurement. The analysis is interesting given the measurement issues I observed in Studies 4 and 5. It suggests that infrahumanization, or the differential attribution of uniquely human traits to the in-group and out-group, are not a good measure of subtle dehumanization as they did not map onto an independent measure of humanness attribution, ontologization. This challenges the very foundations of research on infrahumanization. Like infrahumanization, ontologization is the distinction of groups on their basis of what constitutes humans (in this case, culture) and animals (nature). Therefore, the denial of culture to an out-group relative to an in-group is a type of subtle dehumanization. Therefore, the authors expected subtle dehumanization to be expressed on both or neither measure of infrahumanization and ontologization.

This hypothesis is similar to my hypothesis that measures of human uniqueness (HU traits and secondary emotions) should yield similar effects for infrahumanization. While, unlike Marcu and Chryssochoou, I do not think the measure of ontologization is necessarily a more "accurate" measure of subtle dehumanization, the results of both

their study and Studies 4 and 5 of the thesis suggest that there are inconsistencies in the literature in what measures are suitable as indicators of dehumanization.

Final Studies

The results and conclusions of the above work (Bain, et al., 2010; Bain, et al., 2009; Marcu & Chryssochoou, 2005; Vaes, et al., 2010a) on infrahumanization provide empirical support for interpreting the first five studies in the thesis. Without that work, the finding of a lack of infrahumanization between meaningful social groups is surprising, given that the majority of work reports infrahumanization. But the studies of Bain et al. (2009), Bain et al. (2010), Marcu and Chryssouchoou (2005) and Vaes et al. (2010) actually document cases in which infrahumanization does not occur between meaningful groups. Therefore, from the view of the field, it can be valid to find groups that are salient, yet that are not infrahumanized.

Still, the reasons why the infrahumanization effect is not observed, as in Studies 1-5 of the thesis, must be explained. Thus far, I have reasoned that the conditions used in the studies did not create inter-group contexts sufficient for infrahumanization and that it is only a very distinct nature of the inter-group context that can illicit infrahumanization. Still, there are other possible explanations. The remaining two studies sought to test two possible alternative hypotheses.

The first hypothesis was that infrahumanization by secondary emotion attribution was not found because the Australian sample being used does not discriminate any group on secondary emotions. Indeed, there is no published work suggesting otherwise. Therefore, Study 6 assessed Australians' secondary emotion discrimination of animals, the group that, by the existing theoretical understanding of emotions, should not be perceived as experiencing secondary emotions. If our Australian sample did not deny secondary emotions to animals, then it could be that the

method of measurement of infrahumanization using primary and secondary emotions is not suitable for Australian samples.

While this hypothesis is supported by Studies 1-5 of the thesis, the support in the literature is mixed. It is unclear if it is a universal construct that humans differentiate between humans and animals on secondary emotions. On the one hand, according to Leyens et al. (2000), French and Spanish colloquial words for primary and secondary emotions (*émotion/emocion* and *sentiment/sentimiento)* exist in daily language. Yet, Leyens et al. (2000) acknowledge that there is not this clear lay distinction between primary and secondary emotions in English, leaving the possitibility that English speakers do not spontaneously perceive differences in primary and secondary emotions.

At the same time, while the difference between primary and secondary emotions does not exist in English colloquial vocabulary, Demoulin (2004a) found that when prompted, English speakers would differentiate between more basic and more complex emotions. Does that mean that English speakers necessarily apply that differentiation spontaneously to human social groups as is the case in infrahumanization? Furthermore, does finding such a differentiation of emotions with a US sample of English speakers (Cuddy, et al., 2007b) mean that there will be the same outcome with an Australian English speaking sample? I do not think the answer is clear. Therefore, it was necessary, theoretically, to establish the denial of secondary emotions to the group most likely to be denied humanness (animals) in our Australian sample. This is the focus of Study 6.

A second possible hypothesis for why infrahumanization was not being found in Studies 1-5 was that the previous five studies were not methodologically sound. One of the functions of Study 7 was to test this hypothesis. It was an international study using the same methods in four countries, Spain, Switzerland, Poland and Australia. The three European countries were selected because they were ones in which

infrahumanization had already been observed. Finding infrahumanization in any of the countries surveyed using the same materials would eliminate the possibility that I had been employing inadequate methodology. Study 7 also had several other aspects, including the use of two novel inter-group contexts, the ability to compare infrahumanization cross-culturally (if it occurred), the use of multiple measures of humanness, and assessment of each country's definitions of humanness.

Finding infrahumanization of animals in Study 6 would show that it is possible to have an outcome in which Australians deny secondary emotions to an out-group. Finding infrahumanization of human groups in Study 7 in any of the countries surveyed would help to eliminate the hypothesis that previous studies in this thesis were not methodologically sound. These findings would open the possibility of alternative hypotheses relating to infrahumanization. These will be explored further in the following chapters.

CHAPTER 9: STUDY 6 - INFRAHUMANIZATION AND ANIMAL GROUPS

In the previous five studies of this thesis, Australians have not attributed less secondary emotions to out-groups compared to in-groups. That is to say, on a measure of secondary and primary emotions, Australians have not displayed infrahumanization towards groups for which infrahumanization would be expected to occur if infrahumanization were as widespread as previous research has claimed (Demoulin, et al., 2009a, p. 202). However, Australians have differentiated the in-group and out-group on the valence of emotions, on attribution of language, on altruism, and on allocation of points. Based on these results, it was possible that secondary emotion attribution is not a suitable humanness attribution variable to be used with an Australian sample. Therefore, the primary goal of Study 6 was to evaluate whether Australians would infrahumanize non-humans on what have been considered secondary emotions[16], therefore granting greater attribution to humans than animals on secondary emotions.

It would come as no surprise that Australians would regard animals as less human than themselves. It is the very nature of the relationship between the groups. However, it was not clear from previous studies in this thesis whether differentiation of levels of emotions are a way in which Australians would differentiate humans and animals (i.e. primary to animals, primary and secondary to humans). If Australians did not deny animals secondary emotions, it could not be said that emotion level is a dimension on which humanness is discriminated by Australians. This would undermine the theoretical argument of much of the infrahumanization literature that attribution or denial of secondary emotion to an out-group is a universal dimension on which humanness is conceived. If animals are granted the same emotions as humans, it would

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[16] I acknowledge that it may be unsuitable to describe denial of human emotions to animals as infrahumanization. They are not human and to deny human attributes to them may be entirely appropriate. However, in the present work, the denial of secondary emotions has already been established as infrahumanization. Therefore, for the sake of continuity of terminology, I will continue to refer to denial of secondary emotions as infrahumanization, regardless of whether the target is human or animal.

also mean that the finding that out-groups were being granted secondary emotions in Studies 1-5 meant that they were not necessarily being considered human. Therefore, attribution of emotions to animals by Australians needed to be examined in order to theoretically claim that denial of secondary emotions is an adequate measure of denial of humanness in an Australian context (Goal 1).

While crucial to the thesis, this was not the only goal of Study 6. It was also an opportunity to study the mechanisms through which infrahumanization may occur. Some groups of humans have relationships with animals that are different from other groups of humans. There are clear differences in the relationship between omnivores and animals, and the relationship between vegetarians or vegans and animals. Certinly not all vegetarians are necessarily anthropomorphizing animal lovers. There are many reasons for choosing a vegetarian diet (e.g. morality, health, religion, taste, and sustainability). However, vegetarians do have in common a relationship with animals that restricts any use of violence or killing. While omnivores often do not have any direct contact with animals that they eat, they do have a general ethos that it is acceptable to kill animals for human consumption. The present study uses this difference in animal-human relationships as the basis for inter-group infrahumanization research. The second goal of the study was to further investigate the process by which infrahumanization occurs by evaluating the infrahumanization of animals by both omnivores and vegetarians.

I expect that vegetarians will humanize animals to a greater degree than omnivores by granting them more secondary emotions. This would suggest that the outcome of humanizing (as well as infrahumanizing) an out-group can also be related to significant consequences for the treatment of that out-group. Vegetarians' humanization of animals would be co-occurring with better treatment of animals

relative to omnivores. This is especially the case for certain animals, such as cattle, as they are animals commonly used for human consumption by Australian omnivores.

The present study investigates the attribution of emotions to three types of animals: (1) apes, that are primates and believed to hold similarities with humans; (2) horses, that historically have a relationship to humans as pets and working animals in Australia; and (3) cattle, that are eaten by many societies, including Australia.[17] Varying the types of animals assessed would allow for differences to become evident in the way different relationships to an outgroup impact attribution of humanness to that group. While apes and horses have a similar relationship to omnivores as to vegetarians, cattle hold an essential difference for omnivores and vegetarians. For vegetarians, they are just another animal; for omnivores, they are distinct as food animals. As such, it is acceptable to omnivores to kill them for human consumption. The same would not be easily said for either of the other two classes of animals – primates or work animals. Indeed, in a study of factors associated with the attribution of human traits to non-humans, chipanzees and horses were among the top three animals rated highest on human traits (Hogan, 1980), while cows were ranked much lower.

I will now give an outline of the full design of the study as a way of introducing the hypotheses.

Participants were asked to complete emotion and psychological state ratings for humans, apes, horses and cattle. The emotion measure was similar to that used in

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[17] It is important to point out that I began with a pilot test to select the animals that would be used in the study. I wanted to have an animal from each group including primates, pets, and eaten animals. It was important that these animals be similarly rated on size, intelligence, and average degree of contact with humans so that those dimensions were not additional variables that would determine participants' attributions on humanness, as those three dimensions inform peoples' views of the humanness of an animal. For example, we humanize dogs more than rabbits (both pets), perhaps because of their perceived superior intelligence. But I wanted to control for these variables and focus on the emotionality and psychological states of the animals and how these informed humanness ratings. This pilot test revealed that the representatives of each animal group most similar were apes, horses, and cattle.

previous studies. One of the new measures in this study was drawn from the work of Haslam, Kashima, Loughnan, Shi and Suitner (2008a). This study measured various psychological states of both the human in-group an animal out-groups. I was curious as to how the different human groups would perceive the mental capacities of animal out-groups, and how this might relate to their attributions of primary and secondary emotions. Halsam et al. (2008a) found subhumans, humans, and suprahumans to be rated differently on wishes (dreams, hopes, desires, prayers), thoughts (imagining, knowing, reasoning, thinking), and intentions (choosing, deciding, expecting, planning). They reasoned that these aspects of mental capacity are informative of the perceived humanness of groups. In addition, the Study 6 questionnaire included a measure of morality, described as including concepts such as honour, fairness, virtue, and principles. According to Haslam (2006), morality is one of the aspects of human uniqueness, in addition to secondary emotions. I wanted to include these measures of psychological states so that they would act as secondary measures of humanness attribution in the event that participants did not deny secondary emotions to the out-groups as in previous studies. Also, the psychological state measures would provide a more nuanced picture of the assessment of the animal out-groups' humanness. Finally, participants answered questions relating to demographics, vegetarianism, and their specific food preferences.

The hypotheses for the ratings of emotions and psychological states are outlined below:

Emotion Attribution

H.6.1. In a two-way interaction between ratings of animal rated and level of emotion, all participants will rate each of the animals (apes, horses, and cattle) as lower in secondary emotions compared with humans. That is, animals will be infrahumanized on ratings of secondary emotions, as these emotions have been pilot tested by

Demoulin, et al. (2004a) and found to be unique to humans. In contrast, participants will not differentiate humans and animals on primary emotions, as these emotions have been found to be non-unique to humans.

H.6.2. Vegetarians will attribute more secondary emotions to the traditionally eaten animal (cattle) compared to omnivores. That is, vegetarians will infrahumanize eaten animals less than omnivores, but have similar ratings on primary emotions. This is because I expect that, for a majority of vegetarians, their stance on violence towards animals coincides with a perceived humanization towards animals. By comparison, omnivores and vegetarians will rate animals similarly on primary emotions. I have no prediction of ratings of omnivores and vegetarians on non-eaten animals for secondary emotions.

Psychological States

H.6.3 Replicating effects seen in Haslam et al. (2008a), participants will rate humans as higher on wishes, thoughts, intentions, and morality than apes, horses and cattle.

H.6.4. Vegetarians will rate cattle higher than omnivores on psychological states (morality, wishes, thoughts, and intentions). I have no prediction of ratings of vegetarians and omnivores on psychological states for non-eaten animals.

Methods

Participants and Procedure

One hundred, seventy nine participants (140 women, 39 men), with a mean age of 29.28 took part in the study. Participants were recruited as part of one of two samples: primarily meat eating or primarily vegetarian. The meat-eating sample included 81 students of a third-year psychology course at Australian National University (ANU) who participated in the study as part of a laboratory exercise. Completion of the questionnaire was a course exercise, but return of the questionnaire

was voluntary. These participants completed a pen and paper-based questionnaire described below. The vegetarian sample was contacted through the email lists of two vegetarian organizations: The Vegan Society of New South Wales and the Australian Capital Territory Vegetarian Society. These participants were contacted by the leader of their organization in an email and asked to participate in an online version of the questionnaire described below. Ninety eight members of these organizations completed the questionnaire voluntarily and without compensation.

Materials and Design

The study was a 2 (vegetarian status: omnivore/vegetarian or vegan) x 4 (animal rated: humans/apes/horses/cattle) mixed factorial design. Vegetarian status was a between-subjects variable. Animal rated, was a within-subjects variable.

The questionnaires in the paper based and online versions of the questionnaire were identical. Questionnaires comprised 2 parts. Part 1 introduced the main dependent measures of emotion and psychological state items for the four animal groups: humans, apes, horses, and cattle. Participants were asked to rate 40 emotions and four psychological states for each of four animal groups. The 40 emotion words were originally drawn from Demoulin et al. (2004a) and were the same as those used in Studies 4 and 5. Participants were asked to, "Please think about each of the emotions in the following list and rate how much you think humans (apes, horses, cattle) experience it by writing in a number from the scale." The scale ranged from 1 (very little) to 7 (very much).

The four psychological states that were assessed in the questionnaire included three used in Haslam et al. (2008a) (thoughts, intentions and wishes), with the additional state of morality. Participants were given the four psychological states and a definition of each. Morality was defined as honour, fairness, virtue, and principles. Thoughts were defined as imagining, knowing, reasoning, and thinking. Wishes were

defined as dreams, hopes, desires, and prayers. Intentions were defined as choosing, deciding, expecting, and planning. Participants were asked to "write a number to indicate to what extent you think humans (apes, horses, cattle) possess the ability to experience the following four psychological states" using the same scale as the emotion measure ranging from 1 (very little) to 7 (very much).

Part 2 asked various demographic questions, including age, sex, first language, citizenship, and whether the participant identified as vegetarian or vegan. It also asked his or her reasons for being vegetarian or vegan, including options of moral, health related, religious, environmental, or other. The question of reasons for vegetarianism was asked because I initially made hypotheses based on this variable. However, 82.2% of the vegetarian sample reported "morality" as their reason for vegetarianism. Because of this inequality of participants in each vegetarian reason category, I could not validly compare the emotion ratings across the categories; this variable will not be discussed further.

Another question in Part 2 asked which specific animal-based products that participants eat. This was included to ensure that those who considered themselves to be vegetarian did not eat meat, particularly beef, as the categorization assumed.

Results

Manipulation Check

In total, five participants were removed from the data set. Three did not reveal their status as meat eating or vegetarian, and therefore could not be categorized on the vegetarian status variable. Of the remaining participants from the vegetarian sample, two participants indicated that they eat beef and could not be identified as either omnivores or vegetarians. This left a sample of 174 participants, 87 meat eating (26 men, mean age 24.27) and 87 vegetarian or vegan (12 men, mean age 33.97).

Emotion Ratings and Infrahumanization

To analyse the emotion rating task, emotions were grouped into four categories to form within-subjects factors of primary positive (surprise, pleasure, affection, attraction, excitement, enjoyment, caring, calmness), primary negative (pain, fear, panic, fright, scariness, suffering, anger, fury, irritation, affliction, sadness, distress), secondary positive (love, elation, passion, sympathy, admiration, repentance, hope, nostalgia, optimism), and secondary negative (melancholy, disconsolate, disenchantment, gloomy, disgust, resentment, shame, remorse, embarrassment, guilt, humiliation) emotions. Groupings were derived from testing done by Demoulin et al. (2004a). Values were found for each emotion category by taking the mean of ratings in that category. I examined the emotion attribution hypotheses using a 4-way ANOVA with vegetarian status as a between-subjects variable, and animal rated, level of emotion and valence of emotion as within-subjects variables.

As expected in H.6.1, there was a two-way interaction between animal rated and emotion level, $F(3,172)=328.97, p < .001$. The expected pattern was that there would be differences between the ratings for humans and each animal for secondary emotions (with humans rated significantly higher), but no differences between humans and each animal on primary emotions. To test for this, individual t-tests were run on each comparison between humans and each animal for both secondary and primary emotions. As expected, there were significant differences between ratings of humans (M=6.27, SD=1.05) and apes (M=3.98, SD=1.58, $t[173]=6.16, p<.001$), humans and horses (M= 2.99, SD=1.58, $t[173]=8.82, p<.001$), and humans and cattle (M=2.68, SD=1.58, $t[173]=9.65, p<.001$) on secondary emotions Also, as expected, there were no significant differences in the primary emotions rated between humans (M=6.52, SD=0.66) and apes (M= 6.33, SD=0.79, t[173]=0.51), humans and horses (M=6.02, SD=1.19, t[173]=1.34), or humans and cattle (M=5.68, SD=1.19, t[173]=2.26). When

considering the full sample, humans, apes, horses, and cattle were essentially rated equally on emotions common to both humans and animals, but humans were rated higher on secondary emotions than each of the animal groups. That is, animals were infrahumanized compared to humans, supporting H.6.1.

There was a significant three-way interaction between vegetarian status, level of emotion rated, and animal rated, $F(3,172) = 8.96$, $p < .001$. Figures 9.1-9.4 show the pattern of effects for this three-way interaction. Overall, secondary emotions were rated lower than primary emotions for the animals, but not for humans. Vegetarians rated animals higher on primary and secondary emotions than omnivores, but this difference was not present for humans. The differences between ratings of vegetarians and omnivores for all targets was roughly equivalent between primary and secondary emotions.

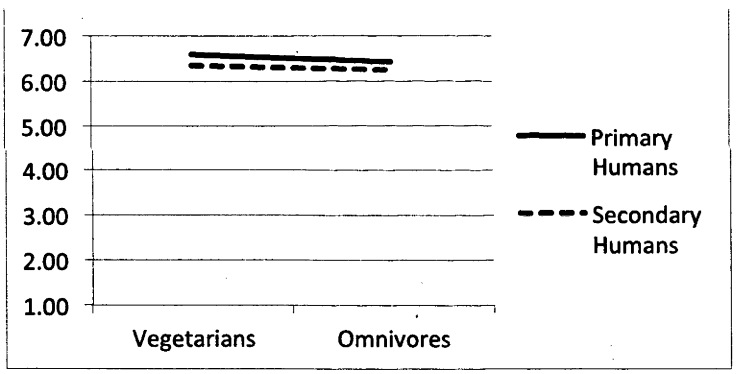

Figure 9.1. Ratings of primary and secondary emotions attributed to humans by vegetarians and omnivores. Shows relatively equal attribution of primary and secondary emotions to humans by vegetarians and omnivores.

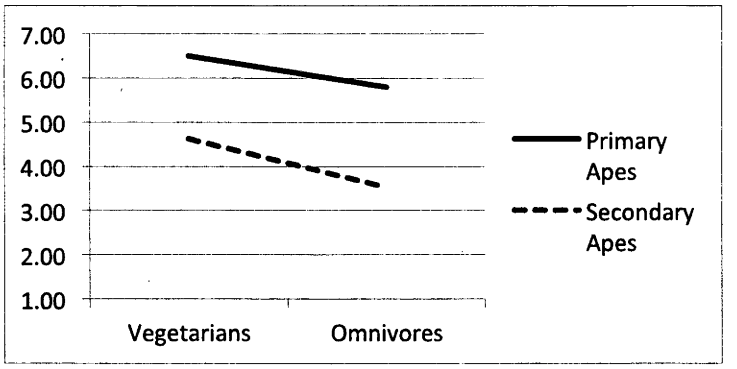

Figure 9.2. Ratings of primary and secondary emotions attributed to apes by vegetarians and omnivores. Shows greater attribution of primary than secondary emotions and greater attribution by vegetarians than omnivores.

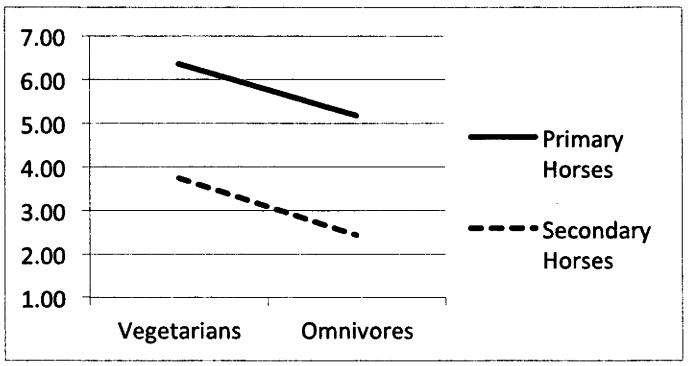

Figure 9.3. Ratings of primary and secondary emotions attributed to horses by vegetarians and omnivores. Shows greater attribution of primary than secondary emotions and greater attribution by vegetarians than omnivores.

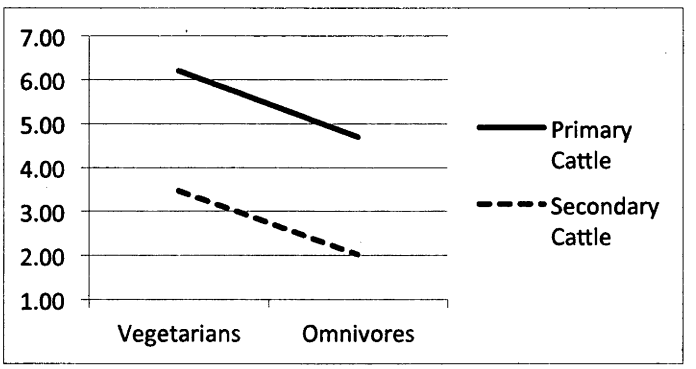

Figure 9.4. Ratings of primary and secondary emotions attributed to cattle by vegetarians and omnivores. Shows greater attribution of primary than secondary emotions and greater attribution by vegetarians than omnivores.

As predicted in Hypothesis 2 (H.6.2), in a pairwise comparison, vegetarians rated cattle significantly higher on secondary emotions than did omnivores ($t[173]=2.97, p<.05$). Therefore, H.6.2 that predicted that vegetarians would attribute

human emotions to the eaten animal (cattle) to a greater extent than omnivores was supported. While the patterns of ratings for apes, horses and cattle are similar (vegetarians rating animals higher on emotions than omnivores), the ratings for humans were different in that there were relatively equal ratings by vegetarians and omnivores for primary and secondary emotions. Therefore, while there were differences in ratings of animal out-groups, there was a similar assessment of the in-group by vegetarians and omnivores.

Psychological States

The psychological state variables were analyzed using a 3-way mixed ANOVA with vegetarian status as a between-subjects variable and psychological state and animal rated as within subjects variables.

This analysis showed a main effect of the animal rated variable, $F(3,172)= 445.57, p < .001$. Psychological states were attributed to each of the four animal groups in a consistent order. Humans (M=6.62, SD=.05) are perceived to possess psychological states to a greater degree than all other animals. This supports Hypothesis 3 (H.6.3). Apes are attributed the second most psychological states (M=4.54, SD=.11), horses the third (M=3.50, SD=.13), and cattle the least (M=3.18, SD=.13) by both vegetarians and omnivores.

There was a two-way interaction between animal rated and psychological state, $F(9,173) = 40.10, p < .001$. Data for this interaction are shown in Table 9.2. Overall, for morality, there were significant differences between humans and each of the other animals. Again, t-tests were used to analyze the pairwise comparisons. Humans were attributed significantly higher morality than apes ($t[173]=5.37, p<.001$), horses ($t[173]=7.84, p<.001$), and cattle ($t[173]=8.46, p<.001$). For wishes, humans were rated higher than each of the other animals, including apes ($t[172]=7.10, p<.001$), horses ($t[173]=8.62, p<.001$), and cattle ($t[173]=9.29, p<.001$). For thoughts, humans were

rated higher than each of the other animals, including apes (t[173]=3.55, p<.01), horses (t[173]=6.13, p<.001), and cattle (t[173]=9.00, p<.001). For intentions, humans were rated higher than horses (t[173]=5.02, p<.001) and cattle (t[173]=6.06, p<.001), but not apes (t[173]=2.51, p>.05). These pairwise comparisons broadly support Hypothesis 3 (H.6.3) that animals would be denied psychological states relative to humans. The finding for humans and apes on intentions is an interesting exception.

An additional un-hypothesized result is that for morality, thoughts and intentions, apes (our closest animal relative) are seen as distinct from cattle, an animal that is eaten. Apes were attributed significantly greater morality than cattle, (t[173]=3.10, p<.05) greater thoughts than cattle (t[173]=5.45, p<.001) and greater intentions than cattle (t[172]=3.55, p<.01).

Table 9.1
Means for Psychological States

	Morality		Wishes		Thoughts		Intentions	
Animal	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Human	6.37	0.08	6.71	0.05	6.68	0.06	6.59	0.06
Ape	3.9	0.04	3.43	0.14	5.04	0.12	5.44	0.12
Horse	2.75	0.14	2.73	0.14	3.85	0.15	4.27	0.15
Cattle	2.46	0.13	2.52	0.14	3.48	0.15	3.79	0.15

There was a two-way interaction between animal rated and vegetarian status, F(3,172)= 24.69, p<.001, that supports Hypothesis 4 (H.6.4). Vegetarians rated animals (apes, horses, and cattle) higher on psychological states than did omnivores while omnivores rated humans higher on psychological states than did vegetarians. Figure 9.5 shows this interaction.

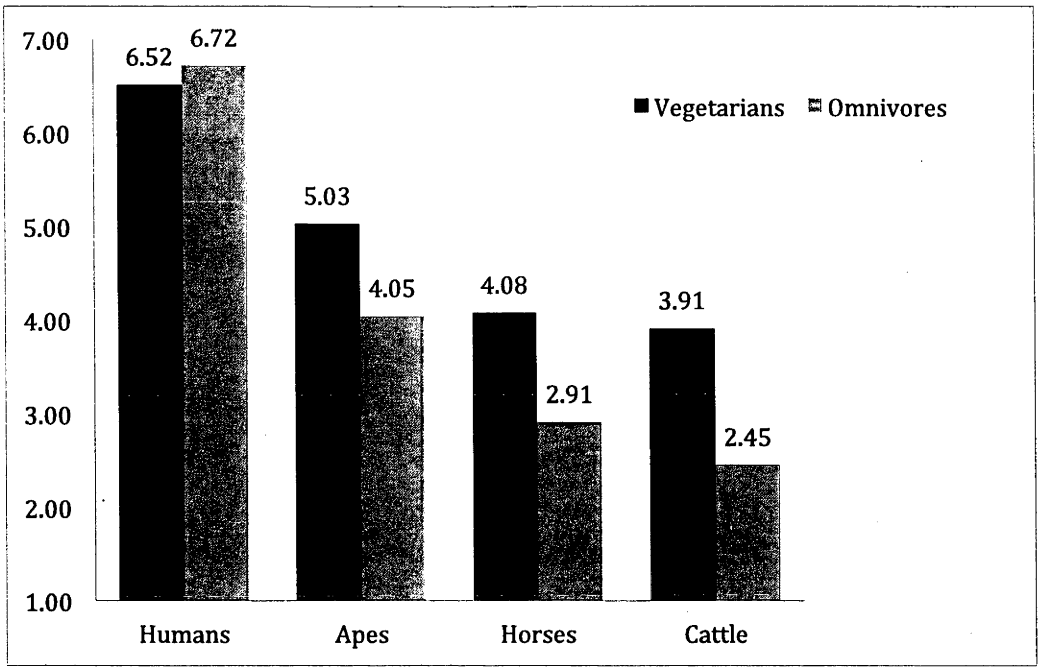

Figure 9.5. Two way vegetarian status by animal rated interaction. Shows higher ratings by vegetarians for apes, horses, and cattle, but a reverse pattern for humans.

The three-way interaction between animal rated, psychological state and vegetarian status was not significant, $F(9,172) = 1.48, p > .05$.

Discussion

Overall, I found that Australian participants tended to deny animals both secondary emotions and psychological states. This alone is an important finding as some previous research, both in this thesis and in the published literature (Bain, et al., 2009), has not found infrahumanization in the domain of human uniqueness between human groups. The present study shows that the human uniqueness dimension by secondary emotions is meaningful to Australians and they do deny human uniqueness traits to non-human groups (H.6.1).

The present study also found that vegetarians humanized apes, cattle, and horses to a greater degree than did omnivores on emotion measures. This was particularly the case for cattle, the only animal traditionally used for food. Vegetarians rated cattle and horses higher than omnivores on emotions overall, but also humanized cattle and horses

in their ratings of secondary emotions (i.e., those thought exclusive to humans), more than omnivores. This finding shows that people's perceptions of the similarity of animal groups to humans and their relationship to them are aligned (H.6.2). That is, for animal out-groups, humanness attributions are dependent on the particular inter-group relationship (or the relationship changes to reflect a belief about humanness). Omnivores and vegetarians have the same relationship to humans and rated them essentially equally on humanness dimensions (Figure 9.1). Omnivores and vegetarians have a different relationship to cattle, and rate them differently on humanness dimensions (Figure 9.4). If a comparison can be made inter-group relationships between humans and animals and inter-group relationships between human groups, I can hypothesize that for human groups as well, humanness attribution is dependent on the particular inter-group relationship. Therefore, humans will perceive human groups' secondary emotions (and, therefore, their humanness) differently based on the nature of the inter-group relationship. In this way, an overarching hypothesis of the thesis (Hypothesis B) has found support and will be further investigated in the analysis of human inter-group contexts in Study 7.

In the attribution of psychological states, apes were set apart by both vegetarians and omnivores as experiencing more morality, thoughts, and intentions than cattle. For both vegetarians and omnivores, there is a clear perceptual difference between the human/ape relationship, and the human/cattle relationship. Apes are our closest animal cousins and, as such, we seem to consider their psychological experiences as being similar to our own. However, vegetarians differed from omnivores in the way that they attributed psychological states to the non-primate animals (H.6.4).

Omnivores set apes apart from horses and cattle in their experiences of thoughts and intentions while vegetarians saw all animals as relatively equal in their abilities to experience thoughts and intentions. This further shows that omnivores categorize some

animals as distinct from others in their humanness depending on humans' relationship to them. Vegetarians' similar relationship to all animals is evident in their equivalent attributions of thoughts and intentions. It may be that the meat-eaters' special regard for apes is based on a perception of greater similarity than between humans and other animals.

As expected, there are marked variations in the attitudes of vegetarians and omnivores towards the eaten animal group, cattle. In part of the anticipated finding for H.6.4, cattle were rated higher on morality by vegetarians compared to omnivores. The combined finding of differences in ratings of secondary emotions and of morality between vegetarians and omnivores makes relevant the concept of moral exclusion in infrahumanization. According to theory on moral exclusion, infrahumanization is considered to be a form of moral disengagement (Haney, 1997). It may be this moral disengagement that is one of the mechanisms that allows for the process of infrahumanization to occur. When members of a group no longer see a target group as possessing morality, they are no longer obligated to treat them according to the moral standards granted to other groups. This is evident in the fact that there is only a significant difference between the ratings by omnivores and vegetarians in the ratings of morality for cattle (H.6.4). The relationship between omnivores and cattle is one of consumption which is not the case for vegetarians. For horses and apes, the relationships are more similar between the animals and the two human groups.

In the time since this study was run, a study has been published looking at a similar interaction between vegetarianism and human uniqueness ratings (Bilewicz, Imhoff, & Drogosz, 2011). The authors find attribution of higher secondary (but not primary) emotions to animals overall by vegetarians than omnivores. They make the case that denial of human uniqueness traits of secondary emotions are "strategies of moral disengagement" (Bilewicz, et al., 2011, p. 201).

They draw this conclusion based on a result that vegetarians and omnivores did not differ on their attributions of humanness of one non-human category (machines) but did differ in their attribution of humanness to animals. From these results, they conclude that there is not an overall difference between the groups in perceptions of humans as superior beings. Rather, they argue that the difference between vegetarians and omnivores specifically relates to a moral disengagement with animals as a group to whom violence is perpetrated.

In addition, they found that omnivores ascribe significantly less secondary emotions to traditionally eaten animals (pigs) than vegetarians. Vegetarians did not differ in their attribution of secondary emotions to the non-eaten and the eaten animals, while omnivores did. Bilewicz et al. assert that vegetarians perceive "unjust superiority in the situation of animal consumption" (Bilewicz, et al., 2011, p. 202) and this is a consequence of including animals in the scope of justice, as described by Opotow (1995). They conclude that it is this inclusion of animals in the scope of justice that results in attributing them with human uniqueness traits of secondary emotions. The findings of Bilewicz et al. are echoed in the findings of Study 6 in that vegetarians perceived more morality in the animal groups. Perception of morality of an out-group may be a key component in determining the humanness of an out-group.

Conclusion

The present study examined the concept of infrahumanization using human and non-human groups. I found two important results. First, the results of Study 6 support the assumption that secondary emotion attribution is a meaningful inter-group dimension for Australian participants and can be used as a functional tool in assessing infrahumanization. Therefore, in looking back at Studies 1-5, if infrahumanization was occurring, it could have been observed with emotion measures.

Secondly, the results showed how the nature of different inter-group relationships engender different perspectives on the humanity of an out-group. Participants rated four animal groups (humans apes, horses and cattle) on primary and secondary emotions and psychological states. The relationships between the human and animal groups generally varied in three ways and there were broad differences in attributions based on these relationships. For example, apes were rated as having more humanness attributes than the other two types of animals. However, all animals were infrahumanized, reflecting the nature of the human/animal inter-group relationship based on an understanding that the two groups fundamentally differ.

But the nature of the relationships differed on another level. Half of participants were vegetarians and half were omnivores. I expected that this would mean that the inter-group relationship would differ between vegetarians and omnivores and the animal group cattle, and be expressed in the humanness ratings. This was indeed the case, showing that the complexities of the nature of the intergroup relationship directly affect the perceptions of humanness.

Study 7, assesses infrahumanization in human groups in a cross-cultural context that compares equivalent methods in samples in four different countries. In this way, any remaining methodological issues can be assessed while exploring the possibility of cross-cultural differences in the expression of infrahumanization and, again, the great variability in the attribution of humanness based on complex inter-group relationships.

CHAPTER 10: STUDY 7 – A CROSS-CULTURAL STUDY OF INFRAHUMANIZATION

Introduction

The seventh and final study of the thesis was a cross-cultural design that used two different inter-group contexts and three measures of humanness. It is a large design, but in designing the study, I had three goals for being able to bring together the theory and results of the previous studies of the thesis.

At this point, it was clear that it is possible that an Australian sample will infrahumanize an out-group by secondary emotions, given the right inter-group context. Specifically, it was evident in Study 6 that Australians do differentiate humans and animals on secondary emotions. Therefore, there is strong evidence that previous studies in this thesis had the potential to observe infrahumanization by Australian participants. To the extent that Study 6 replicated the methodology of Studies 1-5, measuring emotion attribution to in-group and out-group targets, the measurement of the infrahumanization effect in Study 6 supports the claim that Studies 1-5 were methodologically sound for measuring infrahumanization. Still, one goal of Study 7 was to use identical methodology in sampling groups from four countries, Australia, Spain, Switzerland, and Poland.[18] Finding infrahumanization in any of these countries with similar methods to those used in Studies 1-6 would show that it was the nature of the inter-group context within Australia and not inadequate methodology that was the cause of not detecting the infrahumanization effect in the Australian sample with human inter-group contexts.

In addition to the country between-subjects variable, there was another between-subjects variable of inter-group context. There were two inter-group context conditions

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[18] The countries used in this study were selected for both theoretical and practical reasons. Theoretically, I selected countries that were as culturally diverse as possible, to support a cross-cultural design. Practically, I selected countries from which I had made contacts who were willing to become collaborators. Also, these collaborators and their colleagues had already conducted infrahumanization research in their home countries and had detected the infrahumanization effect, increasing the potential to detect infrahumanization results in my study.

in the study. In designing the study, it was important to find inter-group contexts that would have, as closely as possible, equivalent meaning in each country. As observed above, much of the work on infrahumanization has used nationality as an inter-group context (Castano & Giner-Sorolla, 2006; Cehajic, et al., 2009; Costello & Hodson, 2011; Cuddy, et al., 2007b; Delgado, et al., 2009; DeLuca-McLean & Castano, 2009; Demoulin, et al., 2005; Gaunt, 2009; Paladino, et al., 2002; Paladino, et al., 2004; Vaes & Paladino, 2010b; Wohl, et al., 2011). This would, obviously, not be a suitable inter-group context as the relationship between any two countries is quite unique. The same would be true for other inter-group contexts that had been used previously such as language groups (Cortes, et al., 2005), ethnic groups (Cuddy, et al., 2007b), sports teams, and religious groups (Tam, et al., 2007; Tam, et al., 2008). Even using many generic terms such as "immigrants" or "students" proved to be unsuitable due to the differences in the connotations of these groups in the different countries. In the end, the collaborators[19] in each country agreed on two inter-group contexts: people who obey the law and criminals (N. Haslam, 2006), and young-adults and aged-adults (Iversen, Larsen, & Solem, 2009). Of course, even these groups are not completely equivalent in each country context, but they are less affected by political and historical influences than many group contexts used previously. As the study was using inter-group contexts that had not previously been tested in the infrahumanization literature, two inter-group contexts were used to enhance the likelihood of finding infrahumanization in at least one group. This methodological issue provided an additional benefit to the study, an ability to assess infrahumanization of two novel groups on which there is no published infrahumanization work.

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[19] My collaborators on this study were Monika Tarnowska, Chiara Storari, Soledad de Lemus Martin and Steve Loughnan. My deep appreciation goes to them for data collection and consultation in the design of the study.

Another goal of Study 7 was to assess attribution of humanness using the three different measures of humanness. The work of Leyens et al. (2009; Leyens, et al., 2003; Leyens, et al., 2007; Leyens, et al., 2000a; Leyens, et al., 2001) concentrates mainly on using human uniqueness (secondary) emotion attribution to indicate infrahumanization. This is because secondary emotions are thought to be uniquely human traits, yet are characteristics that are not affected by status or power. As addressed in the Chapter 4 analysis of related concepts, Haslam et al. (N. Haslam, 2006; N. Haslam & Bain, 2007; N. Haslam, et al., 2005; N. Haslam, et al., 2008a; N. Haslam & Loughnan, 2008b; N. Haslam, et al., 2008c) have expanded on the concept of humanness by referring to two separate aspects, human uniqueness (HU), and human nature (HN). Haslam et al. (2005) have identified a list of traits that represent each of these concepts. Study 7 measured all three indicators of humanness: attribution of primary and secondary emotions, HU traits and HN traits. In theory, primary and secondary emotions and human uniqueness traits are both measuring animalistic infrahumanization. Human nature traits are measuring what Loughnan and Halsam (2007) call mechanistic dehumanization. Measuring all three of these dependent variables would enable me to have a more complete picture of any denial of humanness in the four countries.

The third goal of the cross-cultural study design was to explore a hypothesis introduced by Bain, Haslam and Kashima (2010; 2009) and Bain, Park, Kwok and Haslam (2009). Bain et al. (2009) reported findings of a study involving Chinese and Australian participants. Australian participants denied a Chinese out-group HN while granting them superior HU. Chinese participants denied an Australian out-group HU but granted them HN on certain measures. Bain et al. describe this as a "complimentary" pattern of humanness attribution.

In explaining these results, the Bain et al. (2010) cite work that describes the Australian self-stereotype as being high in HN characteristics and low in HU characteristics while the Chinese self-stereotype is one of high HU but low HN. Bain et al. (2010) conclude that groups do not necessarily attribute both types of humanness to their own group. Rather, they may attribute more importance to the traits with which they feel their group is more endowed and discriminate in favour of their own group only on those important traits. In a similar manner, Leyens et al. (2007) also previously suggested that different cultures may perceive humanness differently and that research should investigate this possibility. But Leyens et al. do not hypothesize about how to predict on which humanness dimensions a particular group will discriminate. Bain et al.'s explanation of which humanness dimension a group will discriminate on suggests that the self-stereotype of the in-group is the domain in which the in-group will be judged superior.

I agree with this line of reasoning that not all groups find all dimensions of humanness meaningful and use them to differentiate in-groups and out-groups. At the same time, while the self-stereotyping explanation seems to be a valid argument for the Bain et al. work, it cannot be applied directly to the present study. The present study does not use nationality as the basis for inter-group comparison. Therefore, national self-stereotypes are not relevant here. However, in the Bain et al. line of reasoning, the characteristics that make up the self-stereotype of a social psychological group are those that are considered informative about a group's humanness. In that way, characteristics that the group does not possess are not considered informative, and are therefore not suitable to disprove the group's humanness. The first measure included in Study 7 was an assessment of the extent to which participants find HU and HN traits informative about determining the humanness of a social psychological group. Participants rated each of the 40 HU and HN traits on the degree to which they are informative of whether

a being is "human" rather than animal or robotic. By establishing whether HU or HN characteristics were judged more informative about the humanness of a being, I could compare the infrahumanization of groups on HU and HN with which type of humanness was most informative. If groups denied traits that they found informative of humanness (HU or HN) to the out-group and attributed other, non-informative traits to the out-group, then this would be infrahumanizing in traits informative of humanness (i.e. the traits that have more relevance in indicating infrahumanization). This pattern of trait attribution would support Bain et al.'s claim that groups reserve traits that are informative of humanness for their own group. The attribution of traits that a group finds uninformative about humannesss does not necessarily indicate an absence of infrahumanization or what could also be called a humanizing effect. Based on this reasoning, I make predictions in Hypothesis 7.3.

Hypotheses

H.7.1a

On the emotion selection task, I hypothesized that the infrahumanization pattern of emotion attribution would be exhibited differently in different countries, even with identical measures and an equivalent group context. Specifically, I expected a significant three-way interaction between the country sampled, the group rated, and degree to which level of emotion ratings were attributed in each country. I could not make a prediction for precisely which country(ies) would exhibit infrahumanization because the precipitating conditions of infrahumanization are unclear.

H.7.1b

I expected the four-way interaction between country, inter-group context, group rated (i.e. in-group vs. out-group), and level of emotion to be significant. This is because I expected the pattern of infrahumanization (group by level interaction) to differ between countries and between the particular inter-group context that the participants

were rating. Stated differently, I expected the three-way group rated, by level of emotion by inter-group context, interaction to be significant in some of the countries. I expected that people in different countries would not necessarily rate the humanness of both inter-group contexts similarly. That is, while people in one country may infrahumanize an out-group, people in another may not. This is because the meanings made of the particular inter-group contexts will likely be different in each country. However, I had no predictions on precisely how countries would differ on the inter-group context variable.

H.7.2

I hypothesized that there would be a two-way interaction between country and humanness dimension (HU/HN) ratings for the informativeness variable. I expected that participants in different countries would find different dimensions of humanness informative about the humanness of a being, but I did not have specific expectations for which country would find which humanness dimension more informative.

H.7.3

I hypothesized that there would also be differences in the infrahumanization and mechanistic dehumanization by human uniqueness and human nature traits between countries and between inter-group context. This would be exhibited as a four-way country by inter-group context by group rated by humanness dimension interaction.

H.7.3a

I made a more specific hypothesis based on the actual informativeness ratings of the measure of HU/HN informativeness. I expected to see either infrahumanization (denial of HU) or mechanistic dehumanization (denial of HN) on characteristics (HU or HN) that were rated as more informative (H.7.2) for having insight into a person's humanness. I did not predict whether or not they will display infrahumanization or dehumanization on the domain they find less informative about the salient in-group's

humanness; this is because, while they may find one dimension *more* informative, the other may be informative as well and provide grounds for inter-group discrimination.[20]

Methods

Pilot 1 – Emotions

Research collaborators in each country conducted a pilot study on the level and valence of 40 emotion words taken from Demoulin et al. (2004). The purpose of this study was to establish which words in each country are considered positive and negative and which are considered primary and secondary. I had based emotion categories in Studies 1-6 (primary positive, primary negative, secondary positive and secondary negative) on the data gathered by Demoulin et al. (2004a). Recognizing that the Demoulin et al. study was administered in English, I wanted to measure the level and valence of emotions within each country to establish each country's unique emotion categories.

Pilot studies were administered in Spanish in Spain, in Polish in Poland, in English in Australia, and in French in Switzerland. The emotion word lists were translated and backtranslated by the collaborators and one of their colleagues. Pilot 1 had two tasks. In the first part, participants were asked, for each of 40 emotions, to "please tick a box to indicate the 'valence' of that emotion. That is, when you use, hear, or feel this emotion, what degree of negative or positive feelings do you think it expresses?" The rating scale ranged from 1("extremely negative") to 7 ("extremely positive"), with the midpoint of 4 indicating "neutral." In the second part, participants were told, "Some emotions you might use to describe the feelings of both people and

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[20] What is of theoretical importance is not the absolute importance ratings of HU and HN, but the relative importance of HU and HN. Based on the measure, participants may rate both HU and HN highly on importance. This is not of theoretical importance. The hypothesis is based on the assumption that participants finds either HU or HN more informative than the other and will base their humanness ratings on that.

animals. However, other emotions you would ONLY use to describe the feelings of people. In fact, these emotions might sound silly if used to describe feelings of an animal." Participants were then asked to "indicate the extent to which each emotion expresses a feeling that is exclusive to humans by ticking a box along the scale." A rating of 1 was "not at all exclusive to humans" and a rating of 7 is "very exclusive to humans."

The Australian sample included 47 volunteer participants (23 women, 20 men, mean age 22.22) from a psychology research participation pool. The Spanish sample included 29 student participants (19 women, 8 men, mean age 21.03). The Swiss sample included 28 student participants (20 women, 7 men, mean age 21.67). The Polish sample included 30 student participants (21 women, 9 men, 20.83 mean age). For each country, I made a list of four words from each of the four emotion categories (primary positive, primary negative, secondary positive, and secondary negative). I created these groupings by first taking the mean of valence and level ratings, and rank ordering the mean ratings of lowest to highest. I considered ratings above 4 on the valence ratings to be positively valenced and below 4 to be negatively valenced. I considered ratings above 4 on the level ratings to be secondary and below 4 on the level ratings to be primary. I selected four emotion words from the most extreme ends of the scale for both valence and level ratings to create groupings of emotions of primary positive, primary negative, secondary positive and secondary negative emotions. English translations of the words in their categories are in Table 10.1.

Table 10.1

Emotion Level and Valence Categories for the Four Countries.

	Primary		Secondary	
Country	Positive	Negative	Positive	Negative
Australia	Excitement	Pain	Passion	Humiliation
	Enjoyment	Fear	Admiration	Disgust
	Affection	Suffering	Optimism	Embarrassment
	Pleasure	Scared	Nostalgia	Shame
Spain	Pleasure	Scariness	Love	Embarrassment
	Enjoyment	Fury	Passion	Gloomy
	Affection	Suffering	Hope	Remorse
	Surprise	Pain	Optimism	Guilt
Switzerland	Calmness	Fright	Admiration	Shame
	Affection	Pain	Hope	Embarrassment
	Pleasure	Scariness	Passion	Disenchantment
	Enjoyment	Panic	Optimism	Repentance
Poland	Affection	Pain	Optimism	Humiliation
	Pleasure	Fright	Hope	Disgust
	Calmness	Suffering	Sympathy	Shame
	Enjoyment	Fury	Passion	Embarrassment

After assessing the humanness of the emotion words in the four countries, I noticed both similarities and differences between the emotion word categories that emerged. Enjoyment and pleasure were common primary positive words in all countries. Pain was a common primary negative word in all countries, and fear was common to all countries except Spain. Passion and optimism were common secondary positive words in all countries. Embarrassment was a common secondary negative word in all countries, and the secondary negative words were identical in Australia and Poland. While this was a slight methodological variation from the earlier studies in the thesis, the words identified in the four categories in the Australian sample were a subset of the words used in other studies in the thesis. In Study 7, there were 16 total words, with four in each category. Previous studies used between 12 and the full set of 40 emotion words. For this reason, I would not consider the emotion measure in Study 7 as a significant methodological change, Rather it reinforces the emotion categorization of Studies 1-6.

Pilot 2 – Human Uniqueness and Human Nature

Researchers also conducted a second pilot study on the 40 trait terms used to assess human uniqueness and human nature. The study was based on the work of Haslam and Bain (2007) and Haslam, Bain, Douge, Lee and Bastian (2005) which yielded a list of 40 traits rated high and low on desirability, human uniqueness, and human nature. The aim of Pilot 2 was similar to that of Pilot 1 in assessing a unique set of measures relative to each country's cultural understanding but this time with the human uniqueness and human nature qualities of the HN and HU traits. I could not assume that the HN and HU trait categories found within the Australian samples of Haslam et al.'s (2007) work would be applicable in the other countries.

The pilot contained two parts. Participants were asked to rate the 40 traits on how much they reflected human uniqueness ("This characteristic is experienced solely by human beings; it is not experienced by animals."), and human nature ("This characteristic is an aspect of human nature.") on a scale from 1 ("strongly disagree") to 7 ("strongly agree"). The Australian sample included 29 (17 women, 12 men, mean age 36.41) volunteer participants approached in a public space on campus. The Spanish sample included 37 student participants (34 women, 3 men, mean age 19.58). The Swiss sample included 39 student participants (30 women, 9 men, mean age 22.82). The Polish sample included 37 student participants (15 women, 22 men, mean age 21.92).

For the four countries, I generated the humanness trait categories similarly to the process in Pilot 1 with the emotion words. I found the mean of HU ratings and HN ratings for traits within each country, and subtracted the mean of each trait from the total HU or HN mean to find a value for each word equal to its difference from the total HU or HN mean. I was interested in the words that were furthest from the total mean, to find the words that were most reflective of HU and HN. I, then, ranked all of the

emotions in order from least to greatest on their HU score and HN score. I categorized words whose difference scores were one scale point above the total mean for HU as representative of HU and one scale point above the total mean for HN as representative of HN. I eliminated words that appeared as representative of both high HN and high HU. From this, I concluded that human uniqueness and human nature traits in the ANU sample were rated in the same classifications as in Haslam and Bain (2007). The trait categories differed in the other countries. The trait words used for each category for each country are listed in Table 10.2.

Table 10.2
Human Uniqueness and Human Nature Trait Categories for Each Country

	HU		HN	
Country	Positive	Negative	Positive	Negative
Australia	Broadminded	Ignorant	Curious	Jealous
	Humble	Stingy	Analytic	Insecure
	Polite	Rude	Helpful	Impulsive
Spain	Broadminded	Stingy	Fun loving	Impatient
	Sympathetic	Irresponsible	Passionate	Jealous
	Humble	Shy	Analytic	Nervous
Switzerland	Polite	Stingy	Curious	Selfless
	Broadminded	Irresponsible	Imaginative	Impulsive
	Humble	Fun loving	Friendly	Jealous
Poland	Polite	Rude	Ambitious	Curious
	Humble	Hard hearted	Analytic	Passionate
	Conscientious	Timid	Thorough	Jealous

Main Study

Participants

The Australian sample included 234 (152 women, 63 men, mean age 19.22) participants taking part as an activity in a first-year psychology course. The Spanish sample included 100 participants (80 women, 19 men, 1 unreported, mean age 22.43) who took part for partial course credit in either psychology or psychopedagogy. The Swiss sample included 89 participants (59 women, 29 men, 1 unreported, mean age

22.63) who were students taking part for partial course credit in a psychology course. The Polish sample included 55 participants (25 women, 30 men, mean age 22.67) taking part for partial course credit in a psychology course.

Materials and Design

Participants in each of the four countries completed questionnaires that had been translated from English to their home language and then backtranslated into English for confirmation. The study was a 4 (country of sample: Australia/Spain/Switzerland/Poland) x 2 (inter-group context: criminals/aged-adults) x 2 (group of target: in-group/out-group) design, with country of sample and inter-group context as between-subjects variables and group of target as a within-subjects variable.

Questionnaires were divided into "Section 1," containing one part, and "Section 2," containing five parts. The inter-group context manipulation was not presented until Section 2, so questions in Section 1 were answered without a particular inter-group context salient. In Section 1, participants rated the extent to which each of 40 traits from the second pilot study indicated the humanness of a group on a 7 point scale, from 1 ("not at all informative") to 7 ("very informative"). This question was important for analyzing hypotheses 7.2 and 7.3.

Section 2 introduced the inter-group context of the study. Part A told participants that the rest of the study was interested in how they perceive specific groups of people, and introduced the inter-group context manipulation. Participants were told that the researchers were interested in their views about the groups of criminals or aged-adults (out-group) and people who obey the law or young-adults (in-group). Criminals were defined as "people who have committed crimes such as breaking and entering, embezzlement, smuggling, and theft." People who obey the law were defined as "ones who have never committed a crime or spent time in jail." Young-adults were defined as "those between the ages of 18 and 30 who are in the early stages

of their adulthood, just starting a career, perhaps still in college or university, and just starting to think about marriage and families." Aged-adults were defined as "those over the age of 65 who are retired or close to retiring from work, have families who are grown, and maybe are starting to have grandchildren." The aged adult inter-group context questionnaire also noted that "of course, there are also a lot of people who fall between those two age categories. Don't include these "middle aged" people in your idea of young and aged." They were asked to consider the differences between the two groups and write a short description of each group. This task was intended to enhance the inter-group salience.

Part B of the questionnaire, Section 2, included one (criminal inter-group context) or two (age inter-group context) items to verify group belongingness, and a seven-item measure of identification (Doosje, et al., 1995; Leach, et al., 2008). The belongingness questions read, "Have you ever committed a crime or spent time in jail?" in the criminal out-group inter-group context, and "Are you between the ages of 18 and 30?" and "Are you over the age of 65?" on the aged adult out-group inter-group context with boxes to tick yes or no. The seven-item identification measure included items such as, "Being a young adult (person who obeys the law) is an important part of how I see myself" and "Being a young adult (person who obeys the law) gives me a good feeling," with participants indicating their agreement on a 7-point Likert scale, anchored with 1 ("strongly disagree") to 7 ("strongly agree"). Chrombach's alphas for the identification measure in the aged-adult condition was .75, and for the criminal condition was .85.

Parts C and D of Section 2 contained the main dependent variables. Each part asked about either the in-group or out-group, and the order of presentation of groups was counterbalanced. Participants were first presented with the same list of 40 emotion words presented in the first pilot that was taken from Demoulin et al. (2004a).

Although the analysis included only 16 of the emotions that best fit the four emotion categorizations, all emotions were included so that the list presented would be consistent in each country. Participants were then asked to circle those emotions that they thought best described the feelings of criminals/aged-adults (people who obey the law/young-adults). They were told, "You can choose as many as you like but please try not to pick too many". This was a replication of methods used in Studies 4 and 5.

Next, participants were presented with the list of 40 personality traits used in the second pilot study. Again, all 40 trait words were used to maintain consistency between the different countries' versions of the questionnaire. Participants were asked to, "indicate the degree to which you think criminals/aged-adults (people who obey the law/young-adults) possess the following personality traits," using a scale from 1 ("much less than the average person") to 7 ("much more than the average person"). Two different measures were used (selection for emotions and rating for traits) for the two dependent variables in accordance with convention of previous work.

Part E of Section 2 included a manipulation check of the inter-group context being discussed (criminals and people who obey the law or aged and young-adults). It read, "In the questionnaire you have just completed, what were the group categories being discussed" and participants were asked to tick a box of either "criminals and people who obey the law" or "aged and young-adults." There were also demographic questions including age and gender.

Results

Section 2, Part B asked questions to ascertain membership with one of the assumed in-groups in either of the two inter-group contexts. Participants who did not indicate being members of the assumed in-group (people who obey the law or young-adults) were removed from the sample. Part E was a manipulation check of the inter-group context. Participants who did not correctly identify the intergroup context in their

condition were taken out of the sample. This left 196 Australian participants (135 women, 61 men, mean age 19.02), 94 Spanish participants (77 women, 17 men, mean age 22.48), 86 Swiss participants (58 women, 27 men, mean age 22.60) and 55 Polish participants (25 women, 30 men, mean age 22.67)

H.7.1a and H.7.1b

To create variables for emotion selection, I calculated a single "selection value" (value between 0 and 1, representing the percentage of the four possible words chosen) for each participant for each of the four emotion categories (primary positive, primary negative, secondary positive, and secondary negative) based on each country's content of the emotion categories. I found the mean of the values for the four emotions in each group.

Hypotheses 7.1a and 7.1b address the attribution of humanness emotions. Hypothesis 7.1a predicts a three-way interaction between group, level, and country. Hypothesis 7.1b extends that by predicting a four-way interaction between group, level, country and inter-group context (criminal or aged adults). To assess these hypotheses, I conducted a five-way ANOVA with country and inter-group context as between-subjects variables, and group rated, level of emotion, and valence of emotion as within-subjects variables. Overall, there were 20 significant results in such a large design. Regarding the hypotheses, the results were somewhat as hypothesized, but not in a completely straightforward manner. For an overview, refer to the Table 10.3 source table that lists all of the significant effects from the five-way ANOVA.

Table 10.3

Source table of all significant effect from the five-way country by inter-group context by valence by group by level

Significant effects	DF	F=	p <
group	(1,423)	270.25	0.001
group x country	(3,423)	80.92	0.001
group x inter-group context	(1,423)	25.23	0.001
group x country x inter-group context	(3,423)	3.64	0.05
level	(1,423)	83.36	0.001
level x country	(3,423)	76.42	0.001
valence	(1,423)	159.54	0.001
valence x country	(3,423)	47.79	0.001
valence x inter-group context	(1,423)	219.04	0.001
group x level	(1,423)	12.30	0.001
group x level x country	(3,423)	31.24	0.001
group x level x inter-group context	(1,423)	4.97	0.05
group x valence	(1,423)	116.32	0.001
group x valence x country	(3,423)	53.17	0.001
group x valence x inter-group context	(1,423)	59.99	0.001
level x valence	(1,423)	159.19	0.001
level x valence x country	(3,423)	55.75	0.001
group x level x valence	(1,423)	130.55	0.001
group x level x valence x country	(3,423)	64.71	0.001
group x level x valence x inter-group context	(1,423)	4.76	0.05

There was a main effect for group rated, such that emotions were attributed to in-groups (M=.31, SD=.01) to a greater degree than out-groups (M=.19, SD=.01). There was a main effect for level, such that primary emotions (M=.28, SD=.01) were attributed to a greater degree than secondary emotions (M=.22, SD=.01). There was a main effect for country such that the most emotions were attributed by the Polish sample (M=.27, SD=.01), followed by the Swiss sample (M=.26, SD=.01), the Australian sample (M=.25, SD=.01), and the Spanish sample (M=.22, SD=.01). There was a main effect for valence, such that positive emotions were attributed to all groups to a greater degree (M=.30, SD=.01) than negative emotions (M=.21, SD=.01).

There was a significant two-way, group by level interaction that indicated overall infrahumanization,. As shown in Figure 10.1 There was greater attribution of

emotion to the in-group than the out-group for both primary and secondary emotions, but the difference was greater for the secondary emotions.

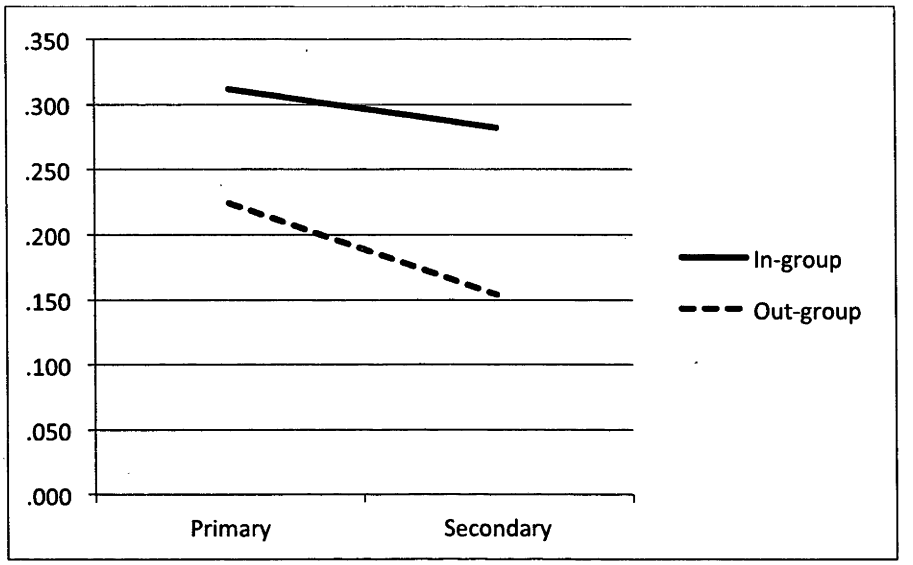

Figure 10.1. Two way, group by level interaction for the whole data set showing overall infrahumanization.

As seen in Table 10.3, the group by country interaction was significant, as was the group by inter-group context interaction and the level by country interaction. Rather than report the means of these interactions, I will report on higher order interactions that encompassed these interactions.

The three-way, country by group by level interaction that was predicted by H.7.1a, was significant. As anticipated, countries differed in the extent to which they attributed primary and secondary emotions. Figure 10.2 shows that, overall, more secondary emotions were attributed to in-groups than out-groups, but the degree to which this was true varied by country. Also varying by country were the levels of attribution of secondary emotions in relation to primary emotions. Of particular note is Spain, for which the in-group is attributed a much greater level of primary emotions than the out-group and this difference is larger than for the secondary emotions.

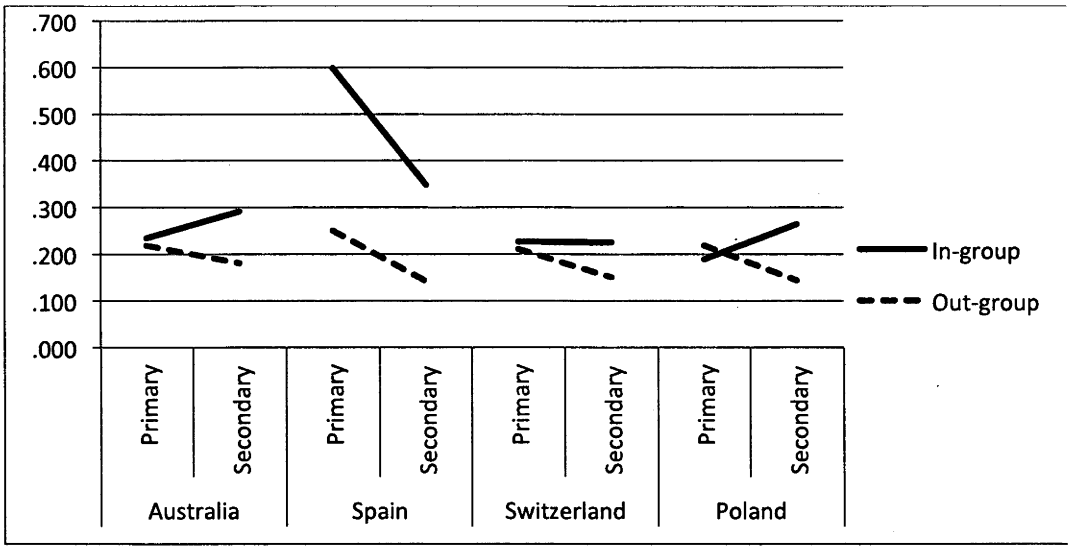

Figure 10.2. Country by group by level significant interaction.

However, before any conclusions can be made on H.7.1a based on the expected three-way interaction, it is important to describe an unexpected line of interactions involving valence that pertain to the three-way country by group by level interaction. There was a three-way group by level by valence interaction, suggesting an overall infrahumanization effect qualified by valence. As Figure 10.3 shows, the pattern was similar to that seen in previous studies in this thesis with more positive secondary emotions being attributed to the in-group and more negative secondary emotions attributed to the out-group, and primary emotions relatively even.

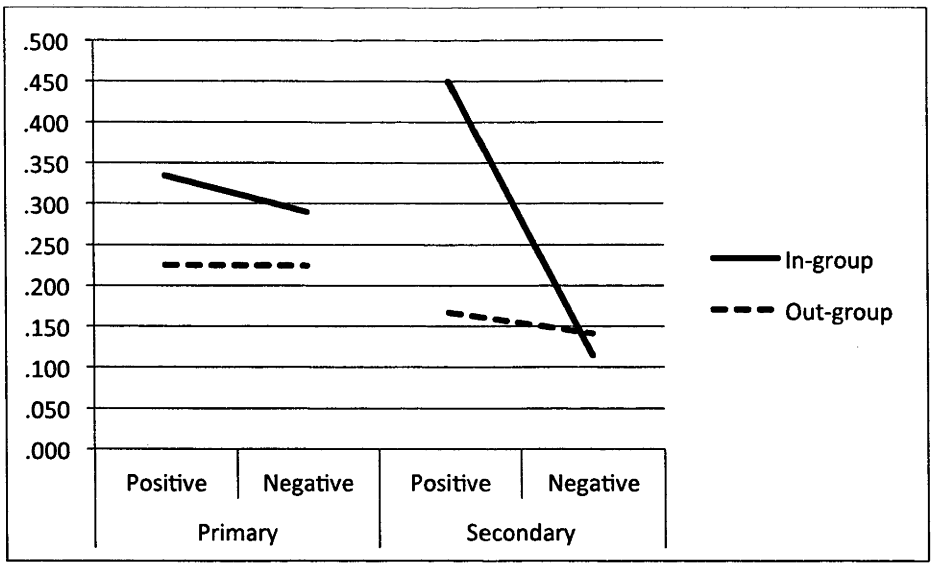

Figure 10.3. Three-way group by level by valence interaction with more secondary positive emotions attributed to the in-group than the out-group and more negative secondary emotions attributed to the out-group than the in-group.

This interaction was further qualified by two, four-way interactions. There was a four-way group by level by valence by country interaction that qualified the three-way group by level by country interaction shown in Figure 10.2, and a four-way group by level by valence by inter-group context interaction.

I will first explain the four-way group by level by valence by inter-group context interaction that qualified the three-way the group by level by inter-group context interaction. As Figure 10.4 shows, for the criminal inter-group context, for secondary emotions, more positive emotions were attributed to the in-group than the out-group and more negative emotions were attributed to the out-group than the in-group. There was also a pattern of slightly more negative primary emotions being attributed to the out-group than the in-group and more positive primary emotions being attributed to the in-group. Overall, then, in the criminal condition, there is more of a pattern of in-group favouritism than infrahumanization. As can be seen in Figure 10.5, however, for the aged-adult inter-group context, for secondary emotions, more positive *and* negative

emotions were attributed to the in-group than the out-group. This is the infrahumanization pattern of emotion attribution.

To analyze this four-way interaction in more detail, I conducted three-way group by level by valence ANOVAs within each inter-group context, criminals and aged-adult groups. For the criminal inter-group context ANOVA, the group by level (infrahumanization) interaction was not significant, $F(1,214)=.70$, $p=.41$. However, the group by level by valence interaction was significant, $F(1, 214)=33.61$, $p<.001$.

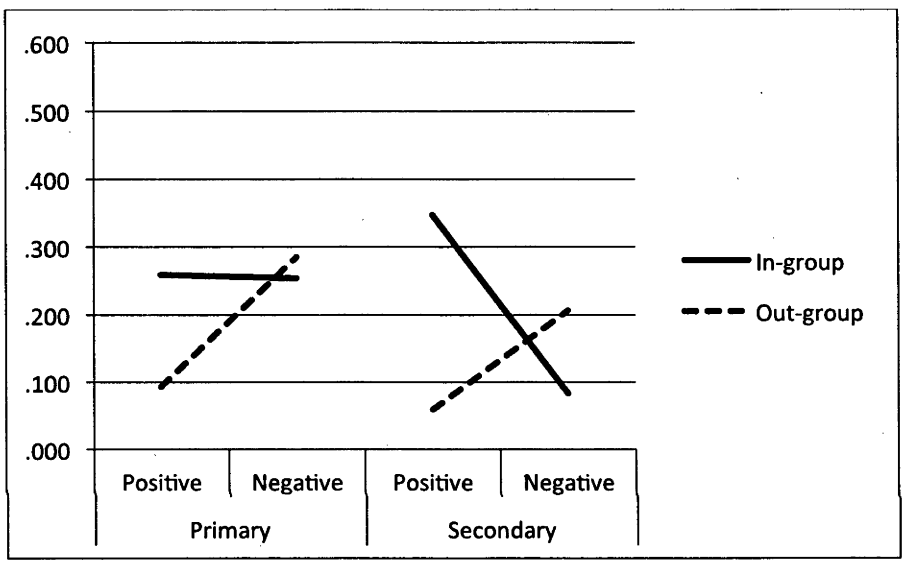

Figure 10.4. Criminal data only showing in-group favouritism in secondary emotion attribution.

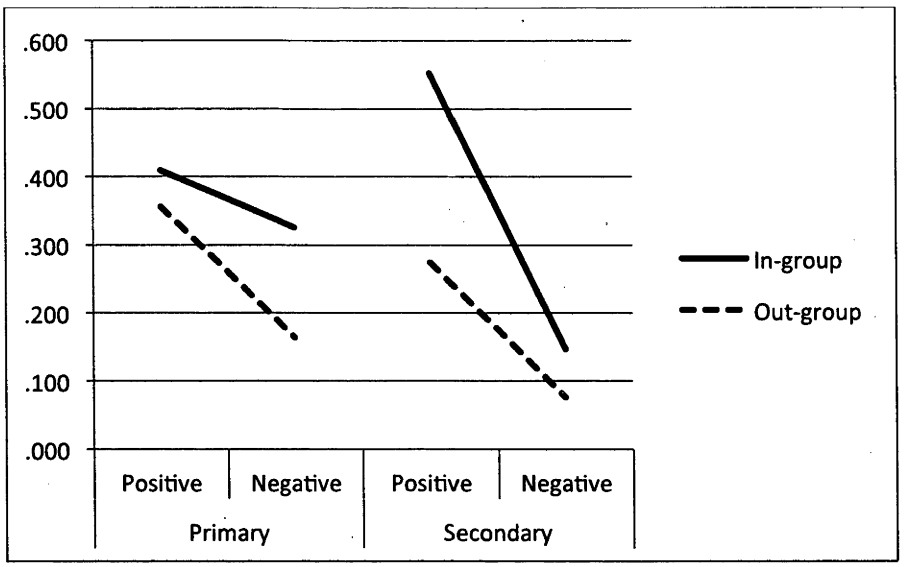

Figure 10.5. Aged-adult data only showing infrahumanization by both positive and negative emotions.

For the aged-adult inter-group context, the group by level interaction was significant, $F(1, 213)=23.11$, $p<001$. The pattern is infrahumanization, with more secondary emotions for the in-group ($M=.35$, $SD=.01$) than the out-group ($M=.18$, $SD=.01$), and a smaller difference between the in-group ($M=.35$, $SD=.02$) and out-group ($M=.26$, $SD=.01$) for primary emotions. However, this is, again, qualified by a three-way group by level by valence interaction, $F(1, 213)=61.41$, $p<001$. The valence interaction is that, while there is a greater difference between in-group and out-group negative emotions for the primary emotions, there is a greater difference between in-group and out-group positive emotions for the secondary emotions. I would still describe this pattern as infrahumanization.

Now we will return to the four-way group by level by valence by country interaction. This interaction suggests an in-group favouritism pattern for some countries and an infrahumanization pattern for others. This interaction can be seen across Figures 10.6-10.9. For Australia (Figure 10.6), Switzerland (Figure 10.8), and Poland (Figure 10.9), the pattern is in-group favouritism, with more positive primary and secondary emotions attributed to the in-group than the out-group, and more

negative primary and secondary emotions attributed to the out-group than the in-group. For Spain (Figure 10.7), the pattern is infrahumanization in the secondary emotions, but there is a very large difference in the negative primary emotions between the in-group and the out-group.

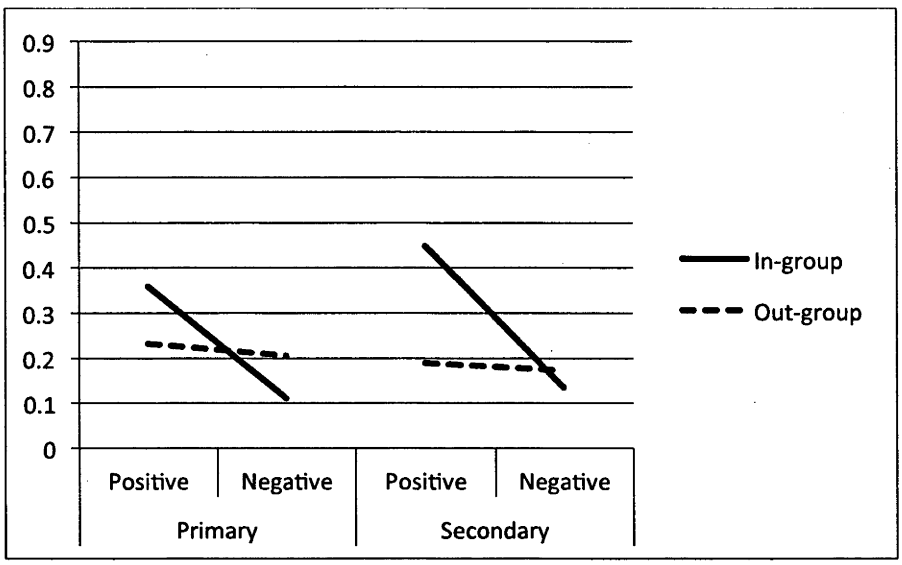

Figure 10.6. Australian data that shows in-group favouritism.

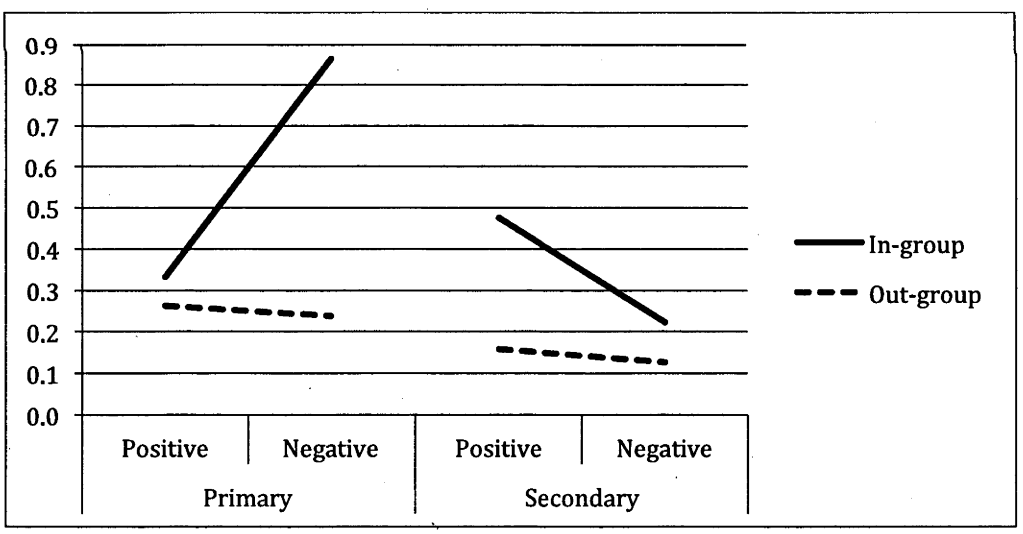

Figure 10.7. Spanish data that shows infrahumanization.

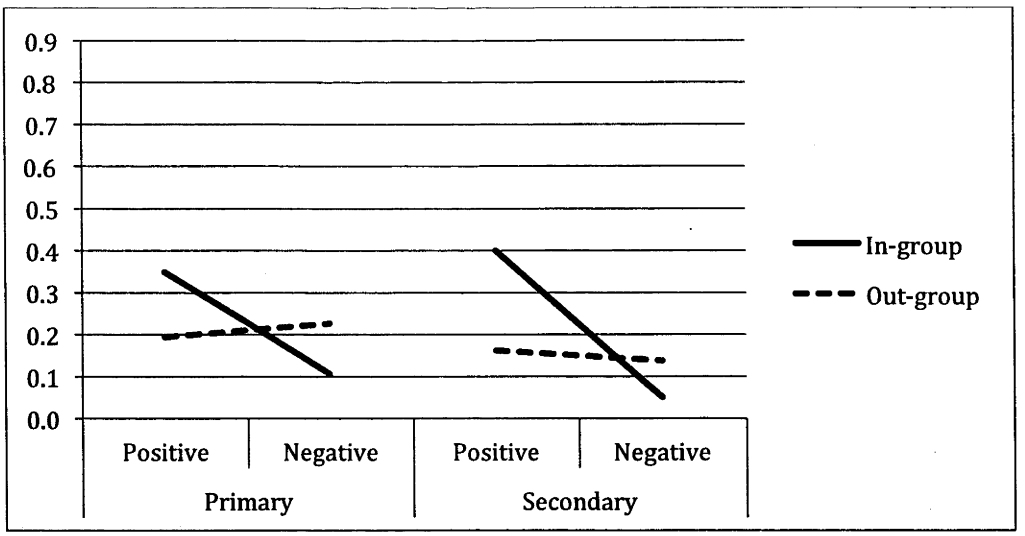

Figure 10.8. Swiss data interaction non-significant.

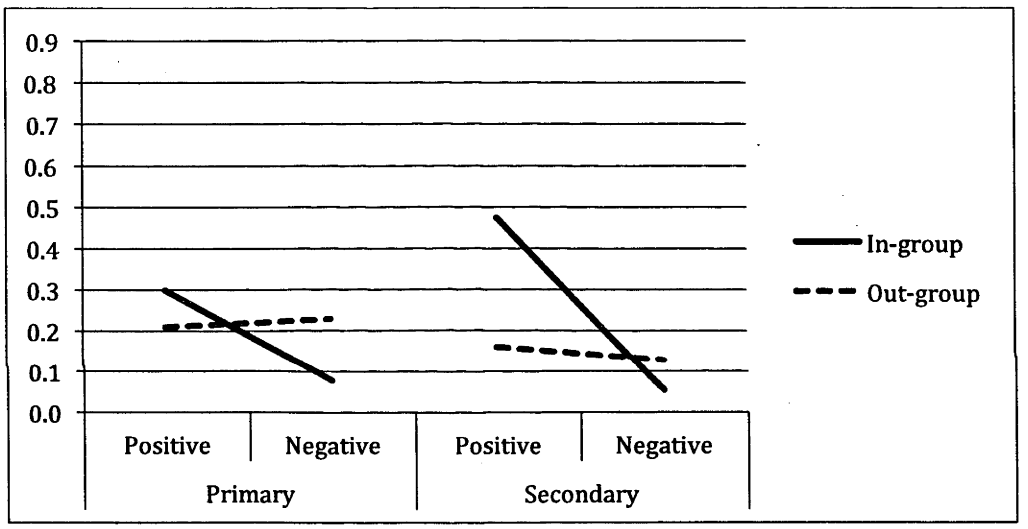

Figure 10.9. Polish data that shows in-group favouritism.

The four-way interaction of country by inter-group context by group rated by level of emotion that was predicted by H.7.1b was not significant, $F(3, 423)=.28$, $p>.05$. Nor was the full five-way interaction, $F(3, 423)=1.71$, $p>.05$. I wanted to explore the four-way group by level by valence by country interaction further, by analyzing the results for each country individually. Also, despite the fact that the predicted four-way country by inter-group context by group rated by level of emotion interaction was not significant, I still wanted to explore the three way group by level by inter-group context interaction within each country. Of course, any results from these analyses need to be

interpreted with caution, but such analyses would simply be an exploration of the data. Therefore, I conducted a four-way, inter-group context by group-rated, by level of emotion, by valence of emotion ANOVA for each country sample with inter-group context as between-subjects and group rated, level of emotion, and valence of emotion as within-subjects variables. I was looking for the three-way inter-group context by group rated by level of emotion interactions within each country sample to observe any differences between the countries in the specific inter-group context. I was also looking at the pattern of the group by level by valence interactions within each country.

In the Australian sample, the two-way, group by level interaction was significant (H.7.1a), showing the infrahumanization pattern overall, $F(1,194)=34.99, p<.001$. There was a small difference in the emotion attribution between in-group ($M=.23$, $SD=.01$) and out-group ($M=.22$, $SD=.01$) for primary emotions and greater attribution of secondary emotions to the in-group ($M=.29$, $SD=.01$) than the out-group ($M=.18$, $SD=.01$). However, this was qualified by a three-way group by level by valence interaction as Figure 10.6 shows $F(1,194)=6.51, p<.05$.

The expected three-way, inter-group context by group rated by level of emotion interaction was not significant, $F(1,194)=.53, p>.05$, but the full four-way interaction was significant, $F(1,194)=4.20, p<.05$. The pattern was similar to the overall pattern found for all countries combined. In the criminal inter-group context, there was a pattern of greater positive emotions attributed to the in-group and greater negative emotions attributed to the outgroup, across level (Figure 10.10). That is, while in the positive emotion attribution there were more primary and secondary emotions to the in-group than the out-group, there was more attribution of primary and secondary negative emotions to the out-group than the in-group. This could also be described as out-group humanization in secondary emotions. In the aged-adult inter-group context, there was

the infrahumanization pattern of greater secondary emotions attributed to the in-group than the out-group (Figure 10.11).

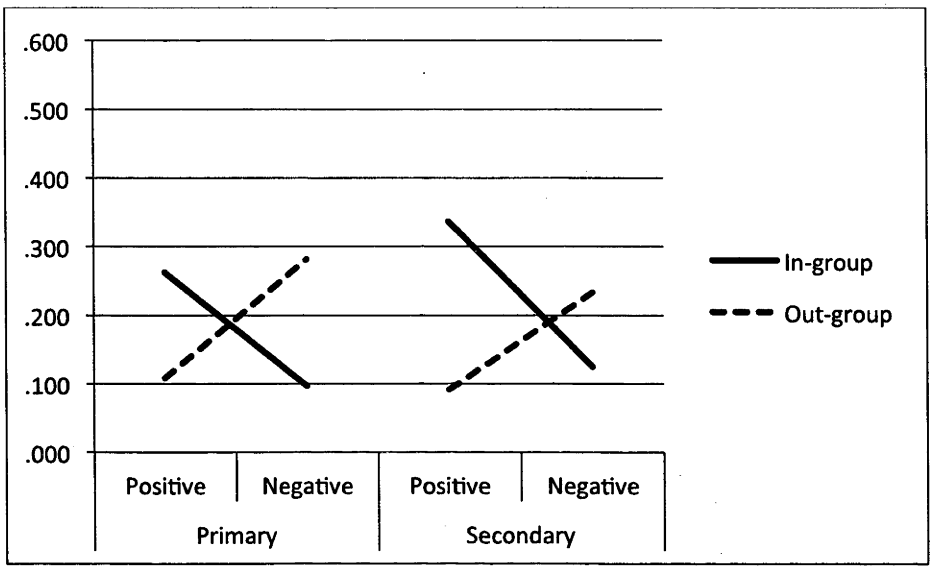

Figure 10.10. Australian sample; criminal context, showing the in-group favouritism pattern.

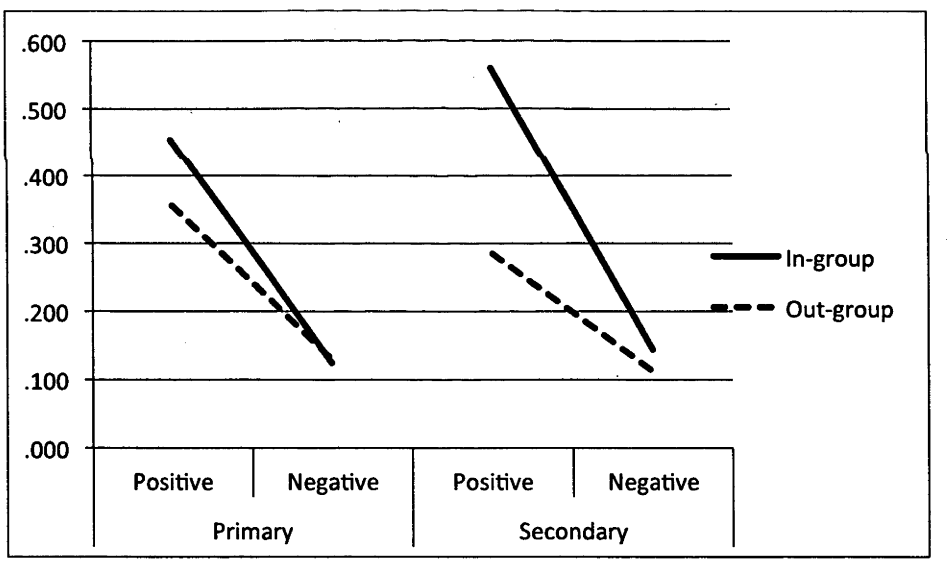

Figure 10.11. Australian sample; aged-adult context, showing an infrahumanization pattern.

In the Spanish sample, the two-way group by level interaction was significant, $F(1,92)=39.65$, $p<.001$; however, the pattern was greater attribution of both secondary ($M_{in}=.349$, $SD_{in}=.02$; $M_{out}=.143$, $SD_{out}=.01$) and primary emotions to the in-group than the out-group, with a larger difference for primary emotions ($M_{in}=.598$, $SD_{in}=.02$;

M_{out}=.250, SD_{out}=.01). This was qualified by a three-way group by level by valence interaction, shown in Figure 7, $F(1,92)=305.48, p<.001$.

The expected three-way, inter-group context by group by level interaction for the Spanish sample was not significant $F(1,92)=1.71, p>.05$. Therefore, the pattern described in the two-way group by level interaction was similar for both the aged-adult out-group inter-group context and the criminal out-group inter-group context. The full four-way interaction was also not significant $F(1,92)=.681, p>.05$. So, in the Spanish sample, patterns of emotion attribution were similar across inter-group inter-group context.

In the Swiss sample, the two-way group by level interaction was significant, $F(1,84)=9.69, p<.01$, as shown in Figure 10.12. It followed an infrahumanization pattern with similar emotion attribution to the in-group and out-group on primary emotions (M_{in}=.23, SD=.02; M_{out}=.21, SD=.02) and greater attribution of secondary emotions to the in-group than the out-group (M_{in}=.23, SD=.02; M_{out}=.15, SD=.02).

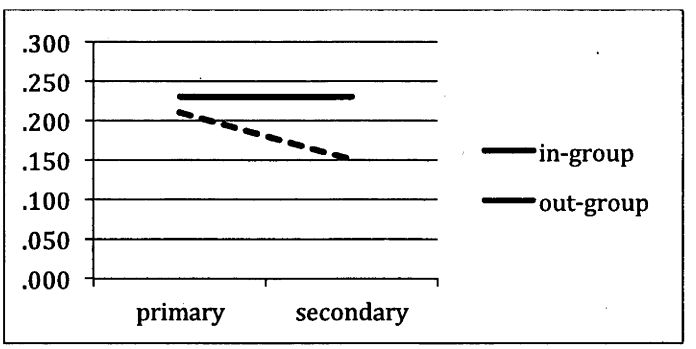

Figure 10.12. Swiss group by level significant interaction. Shows slightly greater attribution of secondary emotions to the in-group and similar primary emotions to the in-group and out-group.

For the Swiss data, the three-way group by level by valence interaction was non-significant, $F(1,84)=1.27, p=.26$. Therefore, the infrahumanization pattern was not qualified by valence. The three-way inter-group context by group by level interaction for the Swiss sample was marginally significant, $F(1,84)=2.89, p=.09$. As Figure 10.13

and Figure 10.14 show, the infrahumanization effect was stronger in the aged-adult inter-group inter-group context than in the criminal inter-group context. The four-way inter-group context by group by level by valence interaction was non-significant, $F(1,84)=2.01, p>.05$.

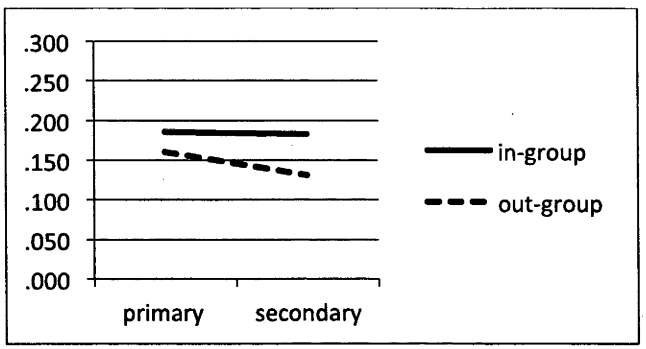

Figure 10.13. Swiss sample in the criminal inter-group context showing a relatively weak infrahumanization effect (significant, $p<.05$) compared to the aged-adult inter-group context (see Figure 10.14).

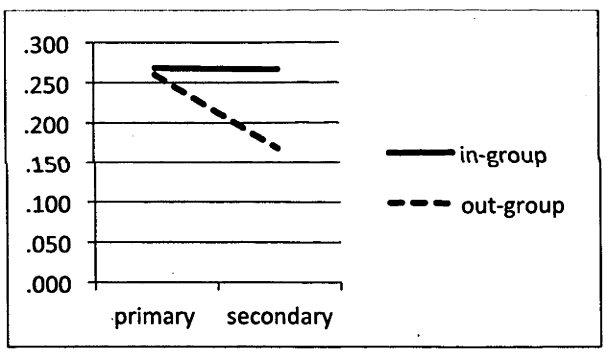

Figure 10.14. Swiss sample in the aged-adult inter-group context showing a relatively strong infrahumanization effect (significant, $p<.001$) compared to the criminal inter-group context (see Figure 10.13).

In the Polish sample, the two-way group by level interaction was significant, $F(1,53)=26.40, p<.001$, in the infrahumanization pattern. While there was little difference between primary emotion attribution ($M_{in}=.19$, $SD=.02$; $M_{out}=.22$, $SD=.02$), there was greater secondary emotion attribution to the in-group than the out-group ($M_{in}=.26$, $SD=.02$; $M_{out}=.14$, $SD=.02$). However, this was qualified by a three-way group by level by valence interaction, $F(1,53)=7.11, p=.01$, shown in Figure 10.9.

The three-way inter-group context by group by level interaction was not significant, $F(1,53)=1.09$, $p>.05$. The four-way inter-group context by group by level by valence interaction was marginally significant, $F(1,53)=3.84$, $p=.06$. The pattern is depicted in Figures 10.15-10.16. In the criminal inter-group context, there was the in-group favouritism pattern of greater attribution of positive primary and secondary emotions to the in-group and greater attribution of negative primary and secondary emotions to the out-group (Figure 10.15). In the aged-adult inter-group context there was an infrahumanization pattern being driven by the positive secondary emotions (Figure 10.16). There were relatively equal positive and negative primary emotions attributed to the in-group and the out-group.

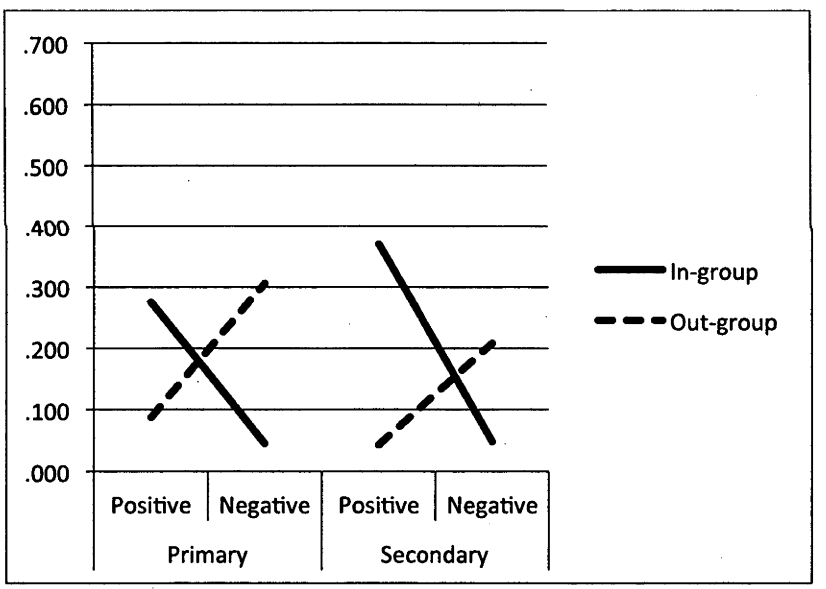

Figure 10.15. Group by level by valence interaction within the Polish sample for the criminal inter-group context.

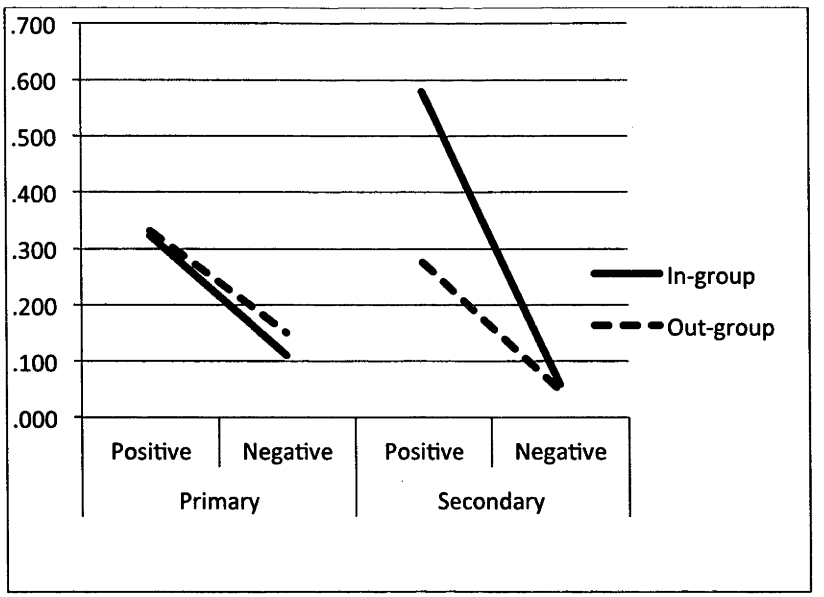

Figure 10.16. Group by level interaction within the Polish sample for the aged-adult inter-group context.

To summarize the results for this section, a two-way group by level interaction showed that there was a general tendency towards infrahumanization, across countries and inter-group context, with greater attribution of secondary emotions to the in-group than the out-group. The country by group by level interaction that was predicted by H.7.1a was significant. While there was always more secondary emotion attributed to the in-group than the out-group, the extent to which this was true differed by country, as did the relative attribution of primary and secondary emotions. However, what was not predicted was the four-way inter-group context by group by level by valence interaction that was also significant, qualifying the three-way interaction. As described above, when valence qualifies the group by level interaction, often, the pattern of emotion attribution is not infrahumanization. In this case, for Australia, Switzerland and Poland, the pattern was in-group favouritism. For Spain, the pattern was more similar to infrahumanization, but the larger difference in primary relative to secondary emotions made the pattern unclear.

Hypothesis 7.1b predicted a four-way interaction between country, inter-group context, group and level. While this interaction was not significant, there were significant interactions in which inter-group context was at play. There was a significant group by level by valence by inter-group context interaction. This showed that overall, across countries, the pattern of emotion attribution in the criminal inter-group context was in-group favouritism, and the pattern in the aged-adult inter-group context was infrahumanization. When I analysed the three-way group by level by valence interaction within each inter-group context, the interactions were again significant in the same pattern. So the emotion attribution pattern overall was different between the two out-group inter-group contexts.

Finally, I also conducted four-way ANOVAs within each country, to explore the data further. The two-way group by level interaction was significant in all four country samples. The three-way group by level by valence interaction was significant in Australia, Spain and Poland. The predicted three-way interaction of group by level by inter-group context interaction was significant in Switzerland, showing a stronger infrahumanization effect in the aged-adult inter-group context than the criminal inter-group context. And the full four-way group by level by valence by inter-group context interaction was significant in Australia and Poland, echoing the pattern in the full sample, with in-group favouritism in the criminal inter-group context and infrahumanization in the aged-adult inter-group context. So in essence, in Australia, there was infrahumanization for the aged-adult inter-group context only. For Spain the pattern of secondary emotions was infrahumanization across inter-group context, but the attribution pattern of primary emotions was not. For Switzerland there was general infrahumanization in both inter-group context, but slightly greater in the aged-adult

inter-group context. For the Polish sample, there was infrahumanization in the aged-adult inter-group context only.[21]

H.7.2

To analyze the second hypothesis, I calculated a variable of "informativeness" for each participant for each humanness category (HU positive, HU negative, HN positive, HN negative) by calculating a single mean of their ratings of the traits in that category. Content of the categories were different for each country and were based on the results of Pilot Study 2. Then, I conducted a two-way, country (Australia/Spain/Switzerland/Poland) x humanness dimension (HU/HN) ANOVA, with country as a between-subjects variable and humanness dimension a within-subjects variable. I collapsed across valence because I was only interested in whether HU or HN traits in general were more informative of the humanness of a group.

The expected two-way interaction between humanness dimension and country was significant, $F(3,427)=4.15$, $p<.01$. Thus, there was a difference in the ratings of the importance of the two types of humanness between countries. Figure 10.17 shows this two-way interaction. There was a tendency to rate HU traits as more informative than HN traits for Australia, Spain, and Switzerland. The pattern reversed for Poland, where HN traits were rated as more informative than HU traits. There were no other significant effects from this analysis.

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[21] As the source table shows, there were additional significant effects from the full five-way ANOVA. However, as these are not theoretically meaningful, they have not been addressed in the chapter. Instead, these are described in the Appendix.

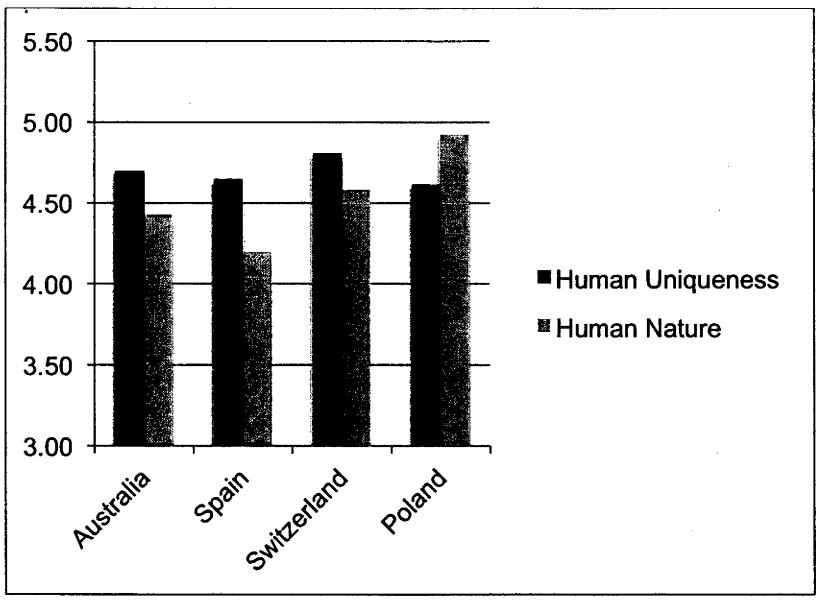

Figure 10.17. Two-way country by humanness dimension interaction with Australia, Spain and Switzerland rating HU higher than HN and Poland rating HN higher than HU.

H.7.3, and H.7.3a

From the results relevant to H.7.2, the details of H.7.3a can now be specified. Regarding infrahumanization in human uniqueness and human nature terms, I would now expect that samples in Australia, Spain, and Switzerland will display infrahumanization in attribution of HU. I expect that the Polish sample will display mechanistic dehumanization in the attribution of HN. To test this, I conducted a four-way ANOVA with country and inter-group context as between-subjects variables and group (in-group/out-group) and humanness dimension (HU/HN) as within-subjects variables.

There were two main effects in the analysis. There was a main effect for group, with in-groups were attributed traits to a greater extent (M=4.24, SD=.02) than out-groups (M=3.97, SD=.02), $F(1,423)$ =99.41, p<.001. There was a main effect for humanness dimension, with greater attribution of HN traits (M=4.22, SD=.02) than HU traits overall (M=3.99, SD=.02), $F(1,423)$ = 181.54, p<.001.

There were three, two-way interactions. The group by inter-group context interaction was significant, $F(1,423)=104.41, p<.001$. While in the criminal inter-group context, people were attributed approximately equal degrees of traits to the in-group (M=4.04, SD=.03), and the out-group (M=4.04, SD=.03), in the aged-adult inter-group context, the in-group was attributed more traits (M=4.44, SD=.03) than the out-group (M=3.90, SD=.03). The group by humanness dimension interaction was significant, $F(1,423)=21.15, p<.001$. Overall, there was virtually no difference between the attribution of HU traits between in-group (M=4.08, SD=.02) and out-group (M=3.90, SD=.02), but more attribution of HN to the in-group (M=4.39, SD=.03) than the out-group (M=4.04, SD=.03). This effect points to broad mechanistic dehumanization by HN traits but a general lack of infrahumanization by HU overall.

Humanness dimension interacted with country such that, while HN traits were attributed more in each country, this was most the case for Poland, and least the case for Switzerland, $F(3,423)=7.58, p<.001$. The means are displayed in Table 10.4. While this interaction was not explicitly predicted by H.7.3a, it follows that the difference between HN and HU is highest where HN was expected to be most informative and the difference between HN and HU is least where HU was expected to be most informative, according to the results relevant to H.7.2.

Table 10.4
Interaction of Humanness Dimension with Country

Country		HU	HN
Australia	M	4.04	4.25
	SD	0.02	0.02
Spain	M	4.00	4.33
	SD	0.03	0.04
Switzerland	M	4.05	4.16
	SD	0.03	0.04
Poland	M	3.87	4.13
	SD	0.04	0.05

I was expecting the full four-way interaction between country, inter-group context, group, and humanness dimension to be significant, but it was not, $F(3,423)=.25, p>.05$. However, the three-way group by humanness dimension by inter-group context interaction ($F(1,423)=321.00, p<.001$) and three-way group by humanness dimension by country interaction ($F(3,423)=2.92, p<.05$) were both significant.

The first interaction of group by humanness dimension by inter-group context showed an interesting pattern, reflecting the unique understanding of the two distinct inter-group relationships. As Figure 10.18 shows, in the aged-adult group, attributions of HU were relatively similar for both groups. But there was mechanistic dehumanization in the HN attribution, with more HN attributed to the in-group than the out-group. In the criminal inter-group context, the pattern was different, as is shown in Figure 10.19. There was generally infrahumanization in HU traits, but humanization of the criminal out-group in HN traits. I will address why this might be the case in the Discussion.

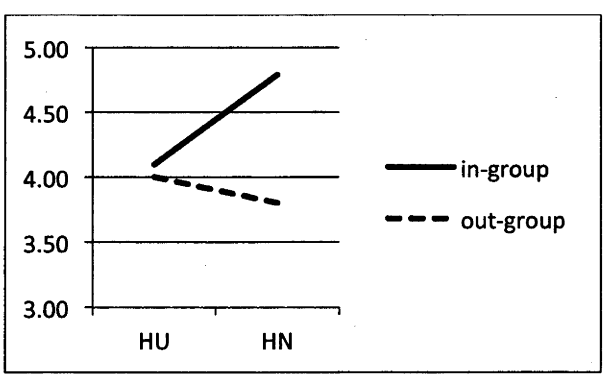

Figure 10.18. Group by humanness dimension interaction for the aged-adult group context showing mechanistic dehumanization in HN traits.

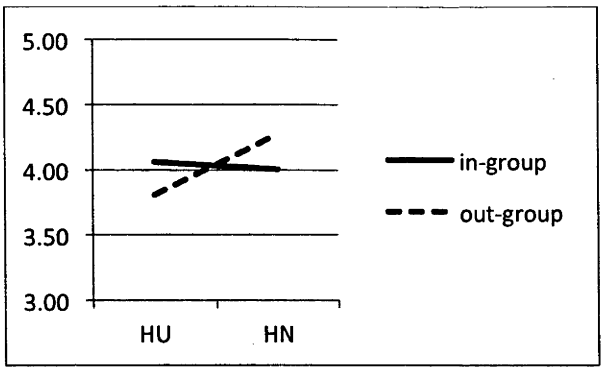

Figure 10.19. Group by humanness dimension interaction for the criminal group context showing infrahumanization by HU and humanization of the out-group by HN.

In the second interaction of group by humanness dimension by country, the patterns are similar in each country with higher ratings of HU and HN to the in-group than the out-group (depicted in Figures 10.20-10.23 by the solid lines always being higher than the dotted lines). There are, however, subtle differences. Figure 10.20 shows that for Australia, differentiation of the in-group and out-group was more substantial in HN than in HU. Figure 10.21 shows that for Spain, differentiation of the in-group and out-group were virtually the same for both humanness dimensions. Figure 10.22 shows that for Switzerland, differentiation of the in-group and out-group was greater for HN ratings than HU ratings, but not significantly. Figure 10.23 shows that for Poland, differentiation of the in-group and out-group was also greater in HN traits than HU traits.

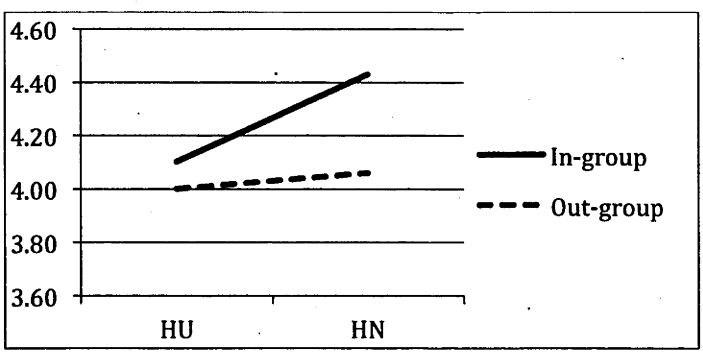

Figure 10.20. HU and HN ratings for Australian sample showing greater inter-group differentiation in HN terms than HU terms.

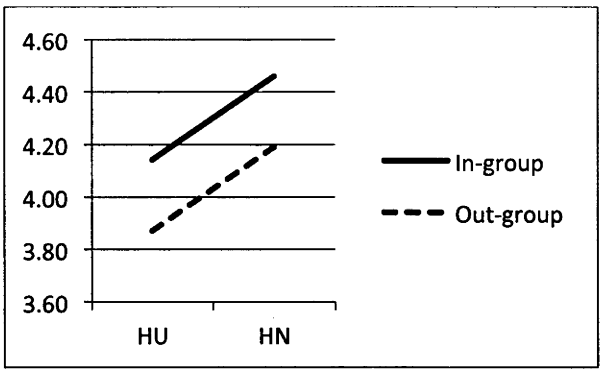

Figure 10.21. HU and HN ratings for Spanish sample showing equal inter-group differentiation in HU and HN traits.

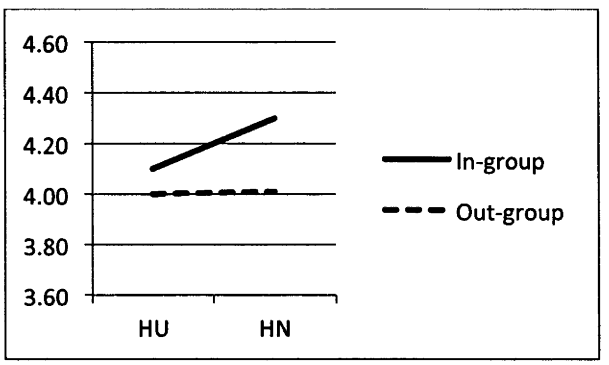

Figure 10.22. HU and HN ratings for Swiss sample showing greater inter-group differentiation in HN terms than HU terms.

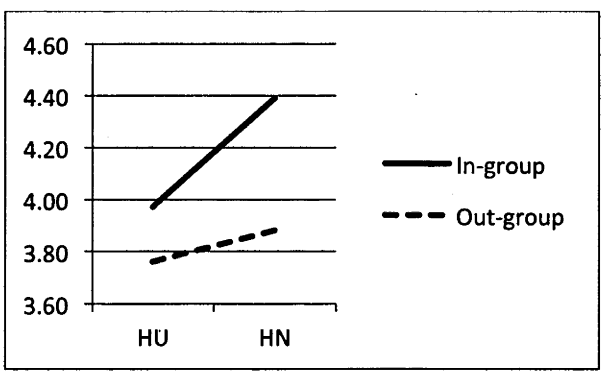

Figure 10.23. HU and HN ratings for the Polish sample showing greater inter-group differentiation in HN terms than HU terms.

Discussion

Overall, the study had many interesting significant effects. The first goal of the study, to gain support for previous methodology, was achieved. Analyses revealed general infrahumanization by emotions attribution in Switzerland and infrahumanization in the aged-adult inter-group context in Australia and Poland. To the extent that the current methodology was a replication of that used in previous studies of the thesis, there is support that the failure to observe infrahumanization in previous studies was the result of the inter-group contexts presented and not a failure of the methodology.

Another goal of the study was to assess denial of human uniqueness and human nature by three measures of humanness. Broadly, HU and HN were attributed differently in different inter-group contexts. There was denial of uniquely human emotions to the aged-adult out-group. There was denial of HU to the criminal group but attribution of HN to the criminal group. For the aged-adult inter-group context the pattern reversed, where HU was granted to the out-group and HN was denied to the out-group. These results shed light on the third goal that wanted to assess the extent to which groups selectively attribute and deny different types of humanness. However, I expected that these attributions would follow the pattern of denial of the humanness traits found most informative for determining humanness. It turned out that the specific measure used in this study was not an effective means of predicting humanness attribution. I will discuss why more in the assessment of H.7.3.

H.7.1a

Hypothesis 7.1a predicted that the patterns of emotion attribution would differ between countries and between inter-group context. That is, samples in different countries would be different in their expression of infrahumanization depending on the reference group. The predicted three-way interaction between group, level, and country

was significant. The patterns in primary and secondary emotion attribution patterns differed in the four samples. Specifically, there was a strong infrahumanization pattern in Australian and Polish samples, a weak effect in the Swiss sample, and an emotion attribution pattern that differed from infrahumanization pattern in the Spanish sample. However, these effects were qualified by a four-way country by group by level by valence interaction. For Australian, Swiss, and Polish samples, there was, instead in-group favouritism. For the Spanish sample, the pattern was not exactly infrahumanization because of an unusual pattern in the primary emotions.

The pattern displayed by the Spanish sample is difficult to explain. One possible explanation of the effect is that contextually, both in-groups were being attributed with greater emotionality overall, compared to the out-groups, based on their unique characteristics. It could also be that primary emotions are more meaningful in the Spanish culture than in the other countries sampled. Alternatively, emotionality itself may be a valued trait in Spanish culture. In either case, the effect of greater primary than secondary emotionality to the in-group would be an expression of in-group favouritism. Without more data, it is not possible to make a firm conclusion.

This result for Australia was similar to that of the rest of the thesis. While there was greater attribution of secondary emotions to the in-group than the out-group, this was the case for positive but not negative emotions. This result is interesting because it shows consistency of infrahumanization being qualified by valence across the thesis in Studies 1, 4, and 5. The similar results in the Swiss and Polish samples and the different pattern in Spain, all countries in which infrahumanization has been measured, paint a picture of infrahumanization as less common than previous literature has claimed.

H.7.1b

Hypothesis 7.1b was that countries would differ in their evaluations of humanness by emotion attribution between the particular inter-group contexts presented. I expected that the meanings made of the inter-group relationships would be unique to each country, and therefore different country's samples might infrahumanize neither, one or the other, or both of the out-groups. The four-way interaction was not significant, so the specific hypothesis was not supported. However, there were some interesting effects involving the inter-group context variable.

There was a four-way inter-group context by group by level by valence interaction showing that across the countries, the meanings of the two inter-group contexts were interpreted differently. The criminal intergroup context resulted in in-group favouritism. Participants expressed the belief that criminals perceive more negative emotions and people-who-obey-the-law more positive emotions. The meaning made of this inter-group context is that the out-group experiences fewer positive and more negative emotions given their life choices. The aged-adult intergroup context resulted in infrahumanization. In this context, the out-group was perceived to experience less uniquely human emotions than the in-group, and by extension, was perceived to be less human.

Also, despite the four-way predicted interaction not being significant, I chose to look at each country individually. While this analysis should be interpreted with caution, there were some significant effects of inter-group context within the country analyses. The above four-way inter-group context by group by level by valence interaction was echoed in Australian and Polish samples. The Swiss sample was the only one in which the group by level interaction was not qualified by valence, and the three-way group by level by inter-group context interaction was significant. There was

greater infrahumanization in the aged-adult inter-group context, but the criminal inter-group context did have the infrahumanization, and not in-group favouritism, pattern.

Within the Australian sample, the group by level by inter-group context interaction was not significant, however the inter-group context by group by level by valence interaction was significant. In the aged-adult inter-group context, the pattern of emotion attribution was infrahumanization. This was the first effect in the thesis in which an out-group was infrahumanized by an Australian sample, and it echoes the findings of Study 6 that given the right inter-group context, Australians will infrahumanize an out-group. However, this effect was not apparent in the most straightforward analyses and was only apparent through some searching. It should be interpreted with caution.

One potential explanation for this effect lies in the order in which the tasks of the study were presented. For the first time in the thesis, this study began with a task asking participants to consider the importance of traits in assessing humanness. This may have primed participants to think of humanness and may have influenced later tasks such as the in-group and out-group humanness emotion attribution task. An improved design of the study would have been to have the trait importance measure as a pilot study, but as the study had two pilot studies already, a third did not seem practical.

H.7.2 and H.7.3

Hypothesis 7.2 was supported. There was a two-way interaction between country and humanness dimension on the importance variable. The Australian, Spanish and Swiss samples found HU more informative and the Polish sample found HN more informative. Hypotheses 7.3a, predicted that each country's sample would deny humanness to out-groups in the humanness domain that they found most informative of

humanness. Therefore, H.7.3a predicted that Australian, Spanish and Swiss samples would deny out-groups HU and the Polish sample would deny out-groups HN.

Australia, Spain, and Switzerland were expected to display infrahumanization in HU traits and Poland was expected to display mechanistic dehumanization in HN traits. The analysis showed a pattern of very small infrahumanization effects by HU traits and larger mechanistic dehumanization effects for HN traits across countries. In particular, while more humanness traits (both HU and HN) were attributed to the in-group than the out-group overall, mechanistic dehumanization by HN traits was actually a stronger effect for the Australian, Swiss, and Polish samples. The effects of infrahumanization and mechanistic dehumanization were generally equivalent in the Spanish sample. The result for Australia and Switzerland were contrary to the findings of the humanness informativeness ratings of H.7.2 with relative greater informativeness of HU in the both samples. The effects for Spain were virtually the same for HU and HN traits, again contrary to what was expected by the findings of H.7.2 and the prediction of and H.7.3a. It was only the effect for Poland, in which there was greater dehumanization by HN traits than infrahumanization by HU traits, that was as predicted by the higher ratings of HN informativeness by the Polish sample in H.7.2. Therefore, operationalized Hypothesis 7.3a was generally not supported.

Similar to previous research (Bain, et al., 2010; Bain, et al., 2009), the Australian sample dehumanized out-groups more by HN traits than infrahumanized out-groups by HU traits. These data support the hypothesis that HU and HN are denied selectively. Previous research has hypothesized that the different dimensions of humanness (HU and HN) are valued differently by different in-groups, and that this is reflected in their attributions of humanness dimensions such that they will favour the in-group on the more valued trait (Bain, et al., 2010; Bain, et al., 2009). Study 7 found differences between groups in the degree to which they found HU and HN informative

of a group's humanness. However, the unexpected effect was that in three of the four countries sampled, participants did not discriminate the in-group and the out-group more on the more informative dimension.

However, I would not conclude that the hypothesis of Bain et al. (2010; 2009) (that groups deny humanness selectively based on the traits they possess) was not supported. Bain et al.'s hypothesis was based on a nationality inter-group context and national group self-stereotypes. In this way, the traits believed to be informative were specific to the inter-group context. In the present study, the measure of the informativeness of humanness traits was not specific to the two inter-group contexts presented. Rather, the informativeness measure was of general beliefs about the informativeness of traits. An improved design would be to have a pilot study asking a sample which types of traits participants think are informative for assessing the humanness of a particular group.

Another interesting effect that came from the H.7.3 analysis was a three-way interaction of group rated by humanness dimension by inter-group context. Across countries, there were differences in the HU and HN ratings of the two out-groups that show the unique nature of the two inter-group relationships. In the aged-adult inter-group context, aged-adults were granted HU, the aspects of humanness that make them refined and civilized, largely to the same degree as the in-group of young-adults. However, the aged-adult out-group was denied the more "salt of the earth" aspects of what makes people passionate, curious, active, and jealous, perhaps suggesting a lack of vitality.

In the criminal inter-group context, there was the expected infrahumanization by HU but an interesting effect for HN. In the HN humanness dimension, across countries, the criminal out-group was attributed more HN than the in-group of people-who-obey-the-law. That is, the criminals were attributed more emotionality, agency, and openness

characterized by traits such as impatient, impulsive, and fun-loving. Said a different way, they have what makes people "only human" and are susceptible to traits such as impulse and curiosity.

Broad Discussion

Several effects demonstrated how the meaning made of inter-group relationships affects the particular way in which humanness is attributed. One was the three-way group by humanness dimension by inter-group context interaction described in H.7.3 that found humanization of criminals and dehumanization of aged-adults. Results are similar to those of Loughnan and Haslam (2007) who found that Australians would attribute HU and HN differently depending on the inter-group context. In their study, artists were denied HU and businesspeople were denied HN.

The other effect that showed the importance of inter-group contextual understandings was in H.7.1b in which the Australian and Polish emotion attribution results showed humanization of the criminal out-group in negative emotions, the Swiss sample showed infrahumanization of the criminal out-group, and the Spanish sample showed an ambiguous pattern. It is clear from these results that culture was affecting the understanding of the nature of the inter-group relationship, and this was being reflected in the inter-group humanness attribution. Out-groups are denied humanness selectively by dimension and by degree, according to the way the in-group views the out-group, and the way the in-group views the out-group in relation to itself.

While there were many nuances in the way types of humanness and degrees of humanness were attributed to in-groups and out-groups, there were also patterns to humanness attribution. When collapsed across valence, secondary emotions were always attributed more to the in-group than the out-group. Collapsed across inter-group context, country and valence, the pattern of emotion attribution was generally that of infrahumanization. Collapsed across country and inter-group context, HN traits were

always attributed more to in-groups than out-groups. That is, groups were reserving more of what it means to be human for their own group, only granting humanness to out-groups under certain inter-group context. The following chapter will review the findings of the thesis as a whole and draw broad conclusions with reference to the overarching hypotheses of the thesis.

CHAPTER 11: SUMMARY AND CONCLUSIONS

The overarching aim of the thesis was to develop further the understanding of the process of infrahumanization. While the initial goals changed over the course of the thesis, taken together, the empirical findings have an impact on the theoretical literature. To conclude the thesis, I will first provide an overall summary of the thesis and the key findings. I will then return to the overarching hypotheses, outline theoretical implications, and describe what the thesis adds to the literature. Finally, I will comment on the state of the research and make suggestions for future research.

Summary and Key Findings

Theoretical Background

Social identity theory. I approached the field of infrahumanization as an inter-group process within the framework of social identity theory. Therefore, I started with the understanding of infrahumanization as a type of in-group bias which is an outcome of social identification and self-categorization processes. Individuals identify with psychological groups as a way to define themselves in the social world (Turner, 1982; Turner & Reynolds, 2001). From these group identities, they derive positive self-esteem (Tajfel & Turner, 1979; Turner, 1999). One way to maintain that self-esteem is to distinguish one's own group positively in comparison to an out-group (Turner & Reynolds, 2001). Humanness is one characteristic from which to gather positive distinctiveness. Infrahumanization takes place to the extent that humanness is a relevant inter-group category for comparison.

Infrahumanization. According to the literature and my operational definition, infrahumanization is a very specific effect. It is an inter-group phenomenon that is a subtle denial of a degree of humanness to members of another group (Leyens, et al., 2000b). It is not a complete denial of the humanity of an out-group, and in this way it is distinct from dehumanization. It is usually measured in the domain of uniquely human

emotions or through implicit measures, but could also be understood as the denial of either of the other two uniquely human attributes, language and competence (Demoulin, et al., 2004b; Leyens, et al., 2000b). Uniquely human emotions are termed secondary emotions, and those that animals are also thought to experience are primary emotions (Leyens, et al., 2000b). When observed in the attribution of uniquely human emotions, infrahumanization is the attribution of equal primary emotions and greater positive and negative secondary emotions to the in-group compared with the out-group (Leyens, et al., 2001). The research was somewhat ambiguous on the extent to which attribution of primary emotions is informative as an indicator of infrahumanization. I argued in the Chapter 2 that the difference between primary emotions should be less than the difference between in-group and out-group secondary emotions and the secondary should be attributed more to the in-group than the out-group. It is important conceptually that infrahumanization is understood as the denial of both positive and negative secondary emotions, as the denial of only positive emotions would confound infrahumanization with in-group favouritism. I also argue in the infrahumanization theoretical chapter (Chapter 2) that there is not yet sufficient evidence to clarify whether greater attribution of secondary emotions expresses a belief in out-group superiority in terms of uniquely human emotions or actually a type of out-group discrimination based on their dissimilarity to the in-group.

Related concepts. As discussed earlier, the distinction between infrahumanization and dehumanization is a somewhat murky area. In Chapter 4, I observed that in the literature, dehumanization can be thought of as a more general term, of which infrahumanization is one specific type. Otherwise, dehumanization can be thought of as a phenomenon on an equal plane with infrahumanization, but as having different characteristics. There is no consensus in the literature on what separates the two processes, but there are some characteristics outlined. Dehumanization can be

expressed in either a subtle or blatant manner. It may involve the denial of human nature, human uniqueness, language and/or competence. Infrahumanization, however, is subtle and involves the denial of human uniqueness, language and/or competence.

Infrahumanization was also differentiated from several other concepts in the literature such as moral exclusion, delegitimization, dehumanization, in-group favouritism, and the in-group projection model. However, they do have similarities, and for this reason, I used those similar concepts to inform this thesis on potential moderating variables of infrahumanization. Moral exclusion, for example, was described as a potential outcome of infrahumanization wherein a group that is denied its humanness is also denied the moral considerations that accompany that status as fully human. The antecedents of moral exclusion, including identification, contact, and conflict, were examined in Studies 1-5. Delegitimization was described as having similar outcomes as infrahumanization, such as harming or excusing the harm of the out-group after the fact. From delegitimization came the foundations for studying threat and level of contact.

Human nature and human uniqueness. Finally, the concepts of human uniqueness and human nature were introduced. Human uniqueness is the domain that separates humans from animals. Human uniqueness is assumed to include culture, higher cognition, sophisticated language, and morality. Human nature is assumed to be that which separates humans from automata. It is what makes humans warm-blooded, feeling beings with depth and individuality. Human nature includes those attributes that involve warmth, flexibility and animation (Loughnan & Haslam, 2007). These concepts are not two ends of the same continuum, but rather two distinct attributes. I showed this experimentally in Study 7.

Introduction to Studies 1-5. The final chapter in the theoretical section out-lined goals for the thesis and introduced broad theoretical hypotheses. The primary goal at

the outset was to pursue identifying the necessary and sufficient conditions that cause infrahumanization. A second goal was to expand the types of inter-group contexts evaluated. The goal of Study 1 was to analyze the effect of threat on infrahumanization. These goals shifted through Studies 2-5 and after Study 5, there was a re-evaluation of the goals. The broad theoretical hypotheses regarded the contexts in which infrahumanization would be observed and the predicting variables. I will return to these in greater detail later in this chapter.

Summary of Findings

Study 1. The first study of the thesis created an inter-group context based on nationality as an Australian and included two conditions in which the migrant out-groups were presented as either economically or culturally threatening to the Australian in-group. The aim was to measure the extent to which the inter-group relevance of economic (or realistic) and cultural (or symbolic) threat influence infrahumanization. This study measured attribution of uniquely human emotions with a rating scale. The study revealed no two-way, group-context by level-of-emotion infrahumanization effect. There was a three-way interaction in which there was attribution of lesser negative secondary emotions to migrants but greater positive secondary emotions. This was hypothesized post facto to be due to stereotype content of the emotions used for the specific inter-group context.

Study 2. The second study of the thesis created one of three inter-group contexts of citizens and immigrants, hetero- and homosexual people, and students and non-student targets. Identification with the in-group was measured. Infrahumanization was again measured with attribution of uniquely human emotions on a rating task. Another dependent variable was the ratings of an altruism scale and the intent to either help or act against the out-group's cause. One purpose of this study was to account for the stereotype content of emotions that was hypothesized to influence Study 1.

Stereotyped emotions were removed from the analysis, but there was still no infrahumanization of any of the out-groups. Therefore, stereotype content did not affect the results as stereotyped emotions were not attributed to a greater extent than non-stereotyped emotions. [22]

In this study, neither the two-way group (in-group/out-group) by level (primary/secondary) interaction, nor the three-way group by level by valence (positive/negative) interaction was significant. Despite these non-significant effects on emotion attribution, there were other significant effects that indicated inter-group processes were at work. There was an in-group favouritism by emotion valence interaction and there was more willingness to help the out-group among low identifiers compared with high identifiers. From these findings, I concluded that the inter-group context was salient yet missing the conditions necessary to elicit infrahumanization.

Study 3. The third study used a sport fan context, with fans of the local Brumbies rugby team as the in-group and the rival Warratahs rugby team as the out-group. Identification with the local in-group team was measured. Dependent measures were uniquely human emotions measured on a rating scale as well as attribution of high and low level language competency summaries of a rugby match. This, to my knowledge, was the first time language proficiency had been used as a measure of infrahumanization. According to the work by Leyens et al. (2000a), language is a characteristic that makes humans distinct from animals. Therefore, to attribute greater language proficiency to the in-group compared to the out-group is a sign of infrahumanization.

For the emotion measure, the two-way, group-rated by level-of-emotion interaction was significant, but in the *opposite* direction that would be expected. There

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[22] However, I did not argue that this study demonstrates that stereotype content is not a factor which affects the measurement of infrahumanization. I did not believe this single study was sufficient to do so.

were more secondary emotions attributed to the out-group than the in-group. The two-way language-level by group-rated effect, however, was significant. Higher proficiency reviews were attributed to the in-group, while low level proficiency reviews were attributed to the out-group. I agrue that this effect is a sign of infrahumanization, even in the absence of infrahumanization by secondary emotion attribution This effect interacted with identification, with high identifiers showing more infrahumanization than low identifiers. Overall, infrahumanization was exhibited in the language measure and not in the emotion measure.

Study 4. In the fourth study, participants read about an Olympic athlete from Australia or Russia who either cheated or did not cheat in the Olympics with performance enhancing drugs. In this way, there were two identity contexts created, nationality and morality. The dependent variables were, again, uniquely human emotions, this time including a selection task as well as a rating task. Two emotion attribution measures were used to test the efficacy of the two types of measurement. For the morality inter-group context, the results in this study had both similarities and differences for the emotion selection task and the emotion rating task. There was no effect of infrahumanization revealed by either of the two emotion measures. There was a significant three-way, group rated by level of emotion by valence of emotion effect on the measure of emotion ratings, that revealed more negative secondary emotions attributed to the out-group and more positive secondary emotions attributed to the in-group for the morality inter-group condition. This three-way interaction was similar for the emotion ranking scale for secondary emotions, but primary emotions were equally attributed between the groups. There were no significant effects for the nationality inter-group context variable. As in Studies 1 and 2, there were no infrahumanization effects with an Australian sample for an inter-group context of nationality. For the

unique inter-group context of morality, there were also no significant infrahumanization effects.

Study 5. The fifth study used a University residence hall context, with participants being members of a University residential hall who rated an out-group of residents of another hall. The independent variable was the group being rated (in-group or out-group). This variable was within-participants. There was also an independent variable of time, with participants being sampled in the first week of residence and then seven weeks later. Study 5 also used both the emotion rating and the emotion selection tasks (as in Study 4). Again, the goal was to measure the extent to which the infrahumanization effect could be detected by two different measurement techniques.

The results for emotion rating showed no two-way interaction for group-rated and level-of-emotion. The three-way interaction was significant, showing more negative secondary traits attributed to the out-group, and more positive secondary attributed to the in-group. For the emotion selection task, there was a two-way group-rated by level-of-emotion interaction that suggested infrahumanization. This was qualified by a three-way interaction including valence that showed infrahumanization only in negative emotions. This means that the infrahumanization effect was driven primarily by negative emotions, which suggests in-group favouritism. I observed that the effects detected by the two different measures of emotion attribution were different. This result calls into question the efficacy of the measures.

Regrouping and Reanalysis. Following Study 5, it was necessary to pause and re-evaluate the direction of the thesis. It was not possible to pursue the initial goals without being able to replicate the infrahumanization effect. I had tried using a diverse range of inter-group contexts and inter-group relationships. I returned to the literature, looking at four studies, three of which had been published since I started the empirical program, in which the infrahumanization effect was measured and not found. These

studies suggested that it was valid to present an inter-group context and not observe infrahumanization. I planned the remaining studies with two new goals. One goal was to evaluate whether Australians would discriminate against any groups in humanness attribution, and the other goal was to examine infrahumanization cross-culturally. I needed to show that the lack of observation of infrahumanization was valid and not due to methodological error. I, then, wanted to explore the way Australians may (or may not) infrahumanize in relation to other countries.

Study 6. The primary purpose of Study 6 was to test whether an Australian sample would deny humanness to non-human groups: animals. That is, would an Australian sample ever demonstrate inter-group discrimination on humanness? I fully expected that the Australian sample would discriminate animals from humans on humanness. But it was theoretically important to demonstrate that it was possible for Australian samples of Studies 1-5 to have displayed inter-group infrahumanization.

A secondary purpose was to test how the difference in nature of the inter-group relationship to the out-group (one of violence vs. non-violence) would affect infrahumanization. Therefore, the participants consisted of both omnivores and vegetarians. Participants rated humans, apes, horses and cattle. The dependent variables were primary and secondary emotions as well as human traits such as thoughts, wishes, intentions, and morals. It was expected that there would be differences in the ratings of omnivores and vegetarians on cattle, reflecting the difference in the inter-group relationship.

The findings, overall, were that animals were rated as less human than humans by both omnivores and vegetarians, as expected. Therefore, the main hypothesis was supported. Australians do show inter-group differentiation in the domain of humanness. They also demonstrated differentiation in the mental states. Humans and apes were attributed greater morality than cattle.

There were also more nuanced effects driven by the differences in the nature of the inter-group relationship between omnivores and animals, and vegetarians and animals. As expected vegetarians infrahumanized cattle (as well as horses) less than omnivores, but no differences were found for apes or humans. On mental states, vegetarians rated cattle as having psychological states to an overall greater degree than did omnivores, particularly for morality. Omnivores did differentiate apes from the other animals, presumably because they are our closest animal cousin. These findings further support the view that the nature of the inter-group relationship affects the attribution of humanness to out-groups.

Study 7. The purpose of the final study was to test infrahumanization cross-culturally to observe any differences between the patterns of infrahumanization between Australians and citizens of other countries. It included samples from four participating countries, Australia, Spain, Switzerland, and Poland. Another independent variable was the inter-group context, which was either criminals (out-group) relative to people who obey the law, and aged adults (out-group) relative to young adults. Dependent variables included emotion ratings, and ratings of HU and HN traits. Theory on human uniqueness and human nature regards HU and HN as two separate domains of humanness, and therefore predicts that denial of one will have no bearing on the other. I tested this in Study 7 and found support, as there were both similarities and differences in the attribution of emotions and HN and HU within, as well as between the countries.

There were broad similarities between countries in how aged adults were evaluated and how criminals were evaluated. Generally, for emotion attribution, out-groups were infrahumanized compared to in-groups and there was greater discrimination in HN traits than in HU traits. However, there were differences between countries that can be attributed to the unique understandings of inter-group relationships within each culture that affects the way groups are rated on humanness dimensions.

For example, the Spanish sample did not infrahumanize on uniquely human emotions. In the Australian and Polish samples, criminals were humanized in negative, but not positive secondary emotions. There were also differences between effects for two inter-group contexts that indicate it is the nature of the inter-group relationships that affects infrahumanization. Criminals were attributed HN but denied HU. Aged-adults were granted HU but denied HN

Another goal of the study was to evaluate discrimination on HU and HN and how the two dimensions are considered to be informative of humanness and stereotypical of the in-group. It was found that neither self-stereotypes, nor informativeness of HN or HU were predictive of in which humanness dimension an out-group would be infrahumanized or mechanistically dehumanized[23].

What Changed?

So what was it about Studies 6 and 7 that created conditions in which infrahumanization would be exhibited in an Australian sample where it wasn't before? While I cannot be certain, I can speculate post-hoc on several reasons why Studies 6 and 7 were theoretically different and created different intergroup conditions from previous studies.

Based on Social Identity Theory, inter-group discrimination happens to the extent to which the comparison dimension is relevant to the inter-group situation. In Studies 6 and 7, humanness, the comparison dimension if infrahumanization is to occur,

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[23] The studies of this thesis consistently used explicit measures of infrahumanization. It is true that some researchers in the infrahumanization work have used implicit measures such as the Implicit Association Task (IAT) (Leyens et al, 2000) and the Person Categorization Task (PCT) (Boccato et al., 2007). However, from the literature, there was no indication that implicit measures were *necessary* to measure infrahumanization, with the explicit measures being more commonly used. Implicit measures were used in one of the first studies on infrahumanization as it was assumed that people would not explicitly attribute greater humanness traits to the in-group over the out-group. However, once it was determined that explicit measures could be used to observe the effect, only four further studies used implicit measures of infrahumanization, mostly with the goal of determining the nature of the attributions (more human to in-group or less human to out-group) rather than finding the effect itself. Therefore, in not using implicit measures, I was adhering to the prevailing methodology used in the literature.

was relevant and salient. In Study 6, this was simply the case because of the nature of the inter-group comparison – humans and animals. And in Study 7, humanness was primed as a domain of comparison by the first task, which asked participants to select traits that were informative of humanness. It is likely, then, that humanness was perceived as a relevant point of comparison in the subsequent tasks of the study. While this priming of humanness was not intentional, it is a key difference between Studies 1-5 and Study 7.

Also, the concepts of SIT allow us to speculate how inter-group discrimination may be more likely when positive distinctiveness is threatened and inter-group boundaries are permeable. In Study 7, there was infrahumanization in the aged-adult out-group condition but not in the criminal out-group condition for the Australian sample. In the criminal condition, the in-group of people-who-obey-the-law are clearly positively distinct. Our society values law-abiding citizens. In the other condition, the positive distinctiveness was less clear. While our society values youth, young people express positive stereotypes of aged adults in some domains (Hummert, 1990; Kite, 1991; Slotterback, 1996). The sample had an average age of 19, and may have felt the need to assert positive distinctiveness from those of a more mature age.

Regarding boundaries, it is again clear why there was infrahumanization in one inter-group condition and not the other. People have almost complete control over their ability to remain in the law-abiding in-group. However, we will all move through life stages, and the young-adults will move into the aged-adult group. This boundary permeability and lack of positive distinctiveness may have been threatening and the participants may have responded with discrimination on the salient dimension of humanness with infrahumanization.

Study 6 had an additional element that may have been influencing the greater infrahumanization of animals by the omnivorous group than by the vegetarian group.

As Castano and Giner-Sorolla (2006) showed, infrahumanization can act as a justification for past violence. Omnivores may struggle with feelings of guilt over meat consumption when faced with the possibility to humanize animals, and may have reacted with infrahumanization to a greater extent than vegetarians because of that guilt.

To summarize, the infrahumanization that was observed in the final two studies, may have seemed incongruous, but may have been driven by social identity principles. Participants were primed to think of humanness. Once humanness was a relevant dimension of comparison, they were motivated by the desire for positive distinctiveness and the threat of inter-group boundaries being permeable. Outside of the SIT domain, participants were motivated by the desire to excuse mistreatment towards an out-group to deny equal humanness to the out-group. In more general terms, I would say that the specific inter-group contexts created were based on a complex interplay of factors led to infrahumanization and these may be able to be predicted by social identity principles. I must reiterate, however, that this commentary is post-hoc, and the analyses did not include mediators or moderators that would support the above explanation. However, the theoretical underpinnings suggest that testing this interpretation might provide valuable insights into the infrahumanization literature.

Theoretical Implications

Return to the Initial Hypotheses

In Chapter 5, I made three broad hypotheses for the thesis, based on the literature presented in the theoretical chapters.

Hypothesis A. The first broad theoretical hypothesis that I made was that the infrahumanization effect would be replicable using similar inter-group contexts as those used in the published research on infrahumanization. This hypothesis was partially supported. When I wrote that hypothesis, I intended "similar" to mean inter-group contexts of nationality and ethnicity, as was the focus of much of the previous published

work. In this sense, the hypothesis was not supported. I used inter-group contexts of nationality in three of the studies, but did not observe infrahumanization in any of them. So, in several Australian nationality-based inter-group contexts, I did not observe infrahumanization. I also measured infrahumanization in a sports context (the other that had been previously evaluated) and did not observe infrahumanization in the attribution of secondary emotions, as was the case in the published work (Gaunt, et al., 2005). I subsequently established that this was not the case because Australians do not discriminate on the basis of humanness emotions (Study 6). Nor was it the result of having inadequate measures (Study 7). At the same time, I would not conclude that the failure to observe infrahumanization in Studies 1-5 is because Australians do not infrahumanize on the basis of nationality. I only tested three very specific contexts. There are countless other inter-group contexts created on the basis of the Australian in-group identity. I would, instead, argue that not observing infrahumanization in Studies 1-5 was because of the nature of the inter-group context that was created.

That said, I did observe the infrahumanization (with human groups) in Study 7 when the inter-group context presented was young and aged-adults, and in Study 6 when the inter-group context was omnivores and animals and vegetarians and animals. The groups themselves were not the same as those in the published literature, but rather the inter-group contexts created by priming and SIT principles resulted in the same out-come of infrahumanization.

In returning to the published literature, there are examples of how SIT principles may have been playing a role in inter-group infrahumanization based on what is known about the nature of the inter-group contexts. For example, in two studies, the inter-group context was such that boundaries were permeable between the two groups, and immigrant groups were potentially capable of moving into the participant's high status in-group. Belgians infrahumanized Arabs who are a threatening and discriminated

immigrant group (Gaunt, et al., 2002; Levecque, Lodewyckx, & Vranken, 2007). Belgians and Spanish infrahumanized North Africans, the most controversial immigrant group to Europe (Paladino, et al., 2002). Two other examples are of inter-group contexts of an illegitimate status differential and impermeable boundaries causing inter-group discrimination in the form of infrahumanization, this time by a low status group. Canarians resent the illegitimate higher status of Penninsulars and infrahumanize them, but do not deny them competence, showing that inter-group discrimination is selective (Leyens, et al., 2001): In another study, French speaking Belgians infrahumanized Flemish speaking Belgians who have illegitimate higher status (Paladino, et al., 2002). In these examples, the published work did not cite these SIT principles as instrumental in driving infrahumanization, but it can be inferred that they were based on the inter-group contexts.

Hypothesis B. The second broad theoretical hypothesis was that infrahumanization is not common to all inter-group relationships. This hypothesis was definitely supported by the empirical program of the thesis. In the whole of the thesis, there were only two inter-group relationships in which Australians showed inter-group discrimination on secondary emotion attribution. These were with animal out-groups in Study 6, and aged-adult out-groups in Study 7. These results are significant because previous research outside of this thesis has had difficulty finding inter-group contexts in which infrahumanization occurs in Australian samples (Bain, et al., 2010; Bain, et al., 2009). This shows that Australians do infrahumanize in particular inter-group contexts, when the intergroup context is humanness and SIT principles call for inter-group discrimination.

However, there were many salient inter-group contexts in the studies of this thesis, in which infrahumanization did not occur. Australian samples did not display infrahumanization in inter-group contexts of nationality when non-Australians were

presented as threatening and immoral. Nor did they display denial of secondary emotions in inter-group contexts including sexuality, student-status, sports team affiliation, and morality. Sometimes the findings were even opposite to the infrahumanization effect as with Studies 3, 4, and 7 in which out-groups were attributed more secondary emotions than the in-group. One variable that is clearly identifiable is that in these conditions, humanness was not primed as a relevant inter-group comparative dimension. However, without having measured inter-group variables such as inter-group permeability, status legitimacy, and degree of inter-group comparison, it is impossible to say exactly what inter-group variables were present or lacking.

While infrahumanization was not often observed, most studies in this thesis indicated that in-group favouritism was occurring for the inter-group contexts created, in terms of valence of emotion. More positive emotions were attributed to the in-group and more negative emotions were attributed to the out-group. Therefore, while in-group favouritism via valence of emotion attribution was happening, infrahumanization via the denial of uniquely human emotions was not. Also, in Study 2 and Study 5, there were in-group favouring attitudes in helping behaviours and allocation of resources. These effects had a positive relationship with identification such that more highly identified participants showed more in-group favouritism. Additionally, in Study 3, there was an effect of infrahumanization on a measure of language attribution, in which high identifiers differentiated the groups more than low identifiers.

All of these effects suggest that the inter-group contexts created were salient and meaningful to the participants. Therefore, there is little support for an argument that infrahumanization was not present because the inter-group contexts were not relevant to the participants. It is evident that the inter-group contexts were meaningful to participants as they showed inter-group differentiation and in-group favouritism. But these inter-group relationships were not ones in which infrahumanization was a

meaningful way to differentiate the groups for in-group members. As the analysis of the third hypothesis describes, exactly what the inter-group relationship is lacking is unclear.

Hypothesis C. The third broad theoretical hypothesis was that infrahumanization can be reliably predicted based on a set of necessary and sufficient conditions. On this hypothesis, the present studies are inconclusive. As I did not observe infrahumanization of a human group until the last study, I was not able to empirically test the conditions required for infrahumanization to occur by experimental manipulation. Any observations on this hypothesis must be inferred from the results of the seven studies.

That said, the picture created in the seven studies is does not suggest that finding the necessary and sufficient conditions would be a simple matter of testing individual variables. Indeed, variables have been proposed as necessary and as sufficient, but not as both (Leyens, 2009). I do not believe that research will show that there is a single inter-group variable or even an interaction of two or several that contribute to infrahumanization such as conflict or contact. I think, and the results support, that it is a constellation of variables that are at play and that these may differ by different inter-group contexts. As SIT predicts, it is not a certain inter-group context that will always result in inter-group differentiation, but rather when there are any of a group of conditions met in the nature of the inter-group comparison.

I return now to Chapter 3 on the foundations of inter-group processes. Infrahumanization is a type of inter-group discrimination, and as such, the SIT approach can offer insight into its mechanisms. As said in Chapter 3, group categorization, for example, on the basis of status or conflict, does not cause inter-group discrimination necessarily (Tajfel & Turner, 1979). The theory outlines four aspects of the inter-group relationship that affect the likelihood of inter-group discrimination. While I would not necessarily assert that it is these same four aspects of the inter-group relationship that

affect infrahumanization, I think that infrahumanization follows the same pattern as inter-group discrimination. It is not the presence or absence of a certain group-level trait, but a combination or constellation of factors that determine how the humanness of an out-group is perceived.

Hypothesis D. The fourth broad theoretical hypothesis was that infrahumanization would be affected by similar variables as related concepts that were introduced in Chapter 4, such as in-group favouritism, moral exclusion, dehumanization, and delegitimization. This hypothesis proved hard to evaluate. I expected to observe the infrahumanization effect in most of the inter-group contexts presented in the studies; I assumed that I would be able to systematically evaluate moderating variables.

Although it may seem like I was chasing the effect, the program of studies was systematic. I began by replicating the inter-group context of previous work. When I did not observe infrahumanization in Study 1 or 2, I began to vary inter-group contexts and inter-group relationship variables in each study, so that in the event that the effect was evident, I could evaluate moderating variables. This was because, as I have said, I began with the idea that infrahumanization would be the result of a particular inter-group variable such as conflict or perceived morality. However, by the end of Study 5, the picture had changed. It became necessary to test whether an Australian sample would deny secondary emotions in any inter-group context, even a non-human one. Finally, in Study 7, the picture of infrahumanization that has developed is that there may not be particular moderating variables. Rather, it may be the complex nature of the inter-group relationship. It may involve variables that have already been studied, but not in terms of the presence or absence of a variable.

In the case of Study 7, it was the case that there was a threat to positive distinctiveness and to boundary permeability, but infrahumanization still may not have

occurred if a different dimension of comparison had been more relevant than humanness. In other inter-group contexts, there may be relevance of humanness but a lack of identification with the in-group or high identification, but no perceived threat of an impotent out-group. While the examples I have provided are particular to SIT concepts, there are likely other intergroup dynamics that would be influential, such as past history of discrimination or conflict or differences in ideology between the groups.

Return to the Literature

Based on the above results, therefore, I can make several conclusions and assertions. Firstly, my findings are in some ways consistent with some previous findings from the literature. In the literature, as well as in the present studies, infrahumanization by denial of secondary (uniquely human) emotions was found to be common across different countries. In Study 7, this included Australia, Switzerland, and Poland. In the infrahumanization literature countries have included the US (Cuddy, et al., 2007b), Chile, Serbia (Cehajic, et al., 2009), Spain (Delgado, et al., 2009), Belgium (Leyens, et al., 2000a), Ireland (Tam, et al., 2008) and others. While I cannot assert the universality of the phenomenon, it was found in three countries that are both culturally and geographically diverse.

My results are also congruent with literature that describes human uniqueness and human nature as distinct concepts (N. Haslam, et al., 2008c). Denial of HU and HN were found to be different in the same group context in Study 7. For example, generally, criminals (the out-group) were attributed less human uniqueness than people who obey the law (the in-group), but more human nature. Aged adults were granted human uniqueness by denied human nature.

Although previous work has suggested that most or all groups (Demoulin, et al., 2009a; Leyens, et al., 2007) would deny humanness to out-groups relative to themselves, the studies of the present thesis form a picture of infrahumanization as an

extremely specific effect, likely to be qualified by additional variables. Most of the published data finds infrahumanization in national or ethnic groups (Castano & Giner-Sorolla, 2006; Cehajic, et al., 2009; Costello & Hodson, 2011; Cuddy, et al., 2007b; Delgado, et al., 2009; DeLuca-McLean & Castano, 2009; Demoulin, et al., 2005; Gaunt, 2009; Paladino, et al., 2002; Paladino, et al., 2004; Vaes, et al., 2010a; Vaes & Paladino, 2010b; Wohl, et al., 2011). While these groups do differ in terms of people's level of identification and the nature of inter-group relations, conflict, as well as other variables, they are only one type of inter-group context. This thesis tested the effect in a wide variety of contexts, including, but not limited to, nationality. Infrahumanization was not found broadly among these inter-group contexts while other inter-group effects were observed.

Also, from the studies in this thesis, the infrahumanization effect does not seem very robust in the way that it is currently measured with emotion attribution. Attribution of secondary emotions was at times measured in this thesis with an emotion selection task as well as an emotion rating task and the results were not always consistent between the two measures. Specifically, in Study 4, infrahumanization results were the same irrespective of emotion rating or ranking. Neither measure observed the infrahumanization effect. However, in Study 5, there were differences in the two-way interaction between group and level with one significant and the other not. If infrahumanization by secondary emotion attribution can be observed with one measurement task and not with another, it is not a very robust effect or the measurement technique is not very precise.

In addition, in Study 3, human uniqueness was granted in an emotion rating task, but denied in a language attribution task. It is theoretically unclear if infrahumanization has occurred if it is found in any of these measures or if it must be all measures, or if infrahumanization is only the denial of secondary emotions in particular. If it is the

latter, infrahumanization does not seem to be denial of humanness generally, but a very specific type of humanness based on a very specific type of inter-group relationship.

The central conclusion that can be drawn from the present work is that infrahumanization is highly context dependent, based on the specific inter-group relationship. Within one country (Australia), results did not indicate that all out-groups, or even most out-groups, are infrahumanized. Between countries, with methods and group contexts held constant, there were differences in the ways and extent to which the same group was infrahumanized. This is likely to be because of the subtle differences in the meaning that participants were making of the nature of the inter-group relationships.

Based on the findings, I can conclude that infrahumanization of a group category by one party does not predict infrahumanization of that same group by another party. For example, in Study 6, omnivores infrahumanized cattle to a greater degree than vegetarians because of the nature of their relationships to the animal. Also, in Study 7, whereas Swiss participants infrahumanized criminals and aged adults, Australian and Polish samples humanized criminals in negative emotions. It was not a characteristic of a category that caused infrahumanization but the unique sociocultural context in which the relationship occurs.

I can then speculate that a group that is infrahumanized in one inter-group context, may not be infrahumanized in another. For example, as Costello and Hodson (2011) find, the same immigrant out-group that is infrahumanized when they present realistic and/or symbolic threat, is not infrahumanized when they present no threat. In this way it is not who "they" are that elicits infrahumanization, but who they are *in relation to us*. A follow up study to Study 7 that could test this hypothesis would be to compare the twenty-year-old attribution of humanness to the over 65 generation and the

forty-year-old attribution of humanness to the over 65 generation. Whereas for the younger group the out-group is a grandparent figure, for the middle-aged group, the out-group is a parent. The difference in those two inter-group relationships may result in different attributions of humanness.

Both of these conclusions are based on the extremely context specific nature of the phenomenon, and the fact that infrahumanization is the result of the nature of the inter-group relationship. In the present set of studies, the inter-group contexts included many of the elements that have been theorized to be at least sufficient to cause infrahumanization, such as highly meaningful groups, high identification, and conflict between the groups. Yet infrahumanization was only found in two (human) inter-group contexts presented in the Australian sample. It may be that there is no simple formula for which inter-group characteristics often predict infrahumanization and which do not. Rather, it is the specific and unique nature of the individual inter-group relationship that causes infrahumanization.

In that sense, trying to predict infrahumanization will be very difficult to the extent that inter-group relationships are constantly in a state of flux. Infrahumanization of an out-group is only likely to be stable to the extent that the inter-group relationship remains stable. Should the nature of the inter-group relationship change, it is likely that the occurrence of infrahumanization between the groups will change. While migrants from one country may be infrahumanized in one decade, migrants of the same nation may not be infrahumanized in the next as they become more integrated, less threatening, smaller in number, or other factors. While players of one rival team may be infrahumanized in one season, they may not be infrahumanized in another season as the players, statistics, and record change. One could argue that the variable nature of infrahumanization renders it meaningless. However, this quality of infrahumanization is really no different to that of other inter-group discrimination processes. For example,

in-group favouritism is not stable. If it is driven by high in-group identification, and that identification becomes less salient, the in-group favouritism will no longer be expressed. So, in this sense, infrahumanization is similar to other inter-group processes.

Future Directions

This brings me to future directions for infrahumanization research. I think the most pressing issue is developing the theoretical underpinnings of infrahumanization. In particular, the area needs to define what it is, and what it is not. I have identified several of the issues throughout this thesis that are theoretical questions for which the answers are unclear. For example, in the attribution of secondary emotions, what is the specific pattern or patterns of emotion attribution that signify infrahumanization? Is it the two interaction patterns that I outlined in Chapter 2, including a larger difference in the attribution of secondary emotions (with more to the in-group) and a smaller difference in primary emotions regardless of which is greater? Does there need to be an overall main effect for group in which the in-group is attributed greater primary and secondary emotions? Do primary emotions provide a baseline comparison or is there not a need to even consider primary emotions in the analysis?

I provided an operational definition for the purposes of this thesis, but the issue is unclear in the literature. I argue that the effect should be a rather specific pattern of emotion attribution. The difference between in-group and out-group primary emotion attribution, as it is theoretically not meaningful for inter-group discrimination, should be a baseline for emotion differences. The secondary emotion attribution difference between in-group and out-group should be larger. If any attribution of greater secondary emotions to the in-group than the out-group is considered infrahumanization with no reference to primary emotions, then a case must be made for why they have traditionally been measured at all. Having the effect be too broadly defined threatens the value of the effect.

Another theoretical question is whether infrahumanization is indicated by greater attribution of uniquely human emotions to the in-group only? Or does it include attribution of uniquely human traits as well? And does it include other domains of humanness such as language and competence? My theoretical understanding is that infrahumanization is the subtle denial of humanness to an out-group, and it should be that denial of humanness on any single one of these domains is infrahumanization. But this is theoretically unclear. And if my assessment is accurate, what type of measurement would be accurate and all-encompassing? Certainly a measure that included brief sections on all three components of humanness (emotion, language, competence) would be more thorough, but would run the risk of being impractical in its length. I would suggest, then, that infrahumanization should be defined as denial of uniquely human emotions and not the denial of humanness generally. As the present thesis has shown (Study 3), the domains of humanness (in this case uniquely human emotion and high competence language) are not denied in confluence, it is incorrect to label denial of secondary emotions as denial of humanness generally. This is a major theoretical shortcoming of the literature.

Also, based on the conclusions drawn in this thesis, there needs to be a change in direction in the empirical work on infrahumanization. The focus, as I have noted, has been on finding the necessary and sufficient conditions that will elicit infrahumanization. But if, as I have claimed, infrahumanization is the result of a unique cluster of inter-group variables that create the nature of the inter-group relationship that may be different in different inter-group contexts, then a single set of necessary and sufficient conditions cannot be found. It does not seem to be the case that if X variable is present or absent, infrahumanization will occur. Based on the studies reviewed in this thesis, it seems more likely that infrahumanization of an out-group occurs in any case when the humanness dimension is made salient and it is useful for an in-group to have a

diminished perception of the out-group's place in the superordinate human group. This may serve the purpose of excusing past or future actions, providing positive distinctiveness, or providing positive group-based self-esteem, for example. I think that particular benefit could be gained from relying more heavily on social identity principles in identifying conditions in which infrahumanization is likely.

Another future direction of the work would be to have a more sustained treatment of culture as a variable in the expression of infrahumanization. Culture is claimed to be an explanation for variations in many social psychological processes such as stereotyping, prejudice, stereotyping, and mortality salience. Whether any such social psychological process is necessarily "universal" would be nearly impossible to prove. But the fact that their expression or outcomes differ between cultures is not evidence that they are *not* universal. For example, Ma-Kellams and Blascovich (2012) found that while mortality salience was common to participants from both eastern and western cultures, participants from eastern cultural perspectives reacted to mortality salience more positively and with resolve for greater enjoyment of life as compared to their western counterparts. The explanation is that culturally, eastern philosophy has more acknowledgement of death being an inevitable part of life than does western culture. The same information (mortality salience) garnered a different response based on the different "lenses" of culture.

I would assert that infrahumanization is similar. I would not claim that infrahumanization is culture-bound or unique to some cultures. But rather, the particular *expression* of denial of humanness is culturally variable. As demonstrated in the thesis, the expression of infrahumanization in the under-attribution of uniquely human traits and emotions has been clearly demonstrated in certain countries, but not as easily in others. Studies 1-5 show that infrahumanization is not readily expressed in an Australian context through the same measures as much of the published literature.

Study 7 tests the expression of infrahumanization for the same inter-group context in four different cultures.

While it is impossible to draw firm conclusions on why this may be the case, it is possible to speculate on why one culture may express denial of humanness differently than another. If culture is an "arbiter" of the way we see the world (Ma-Kellams & Blascovitch, 2012), then it would affect the way we define humanness and who does and does not belong to that category. If humanness is defined by who "we" are and that image is defined by our culture, than the definition of who is human and who is not will be unique to each culture. Furthermore, if the difference between "us" and them "them" is unique to a particular cultural understanding, then we can conclude that as culture affects the nature of the inter-group relationship, this will be reflected in the inter-group humanness attribution.

That said, to truly discern how a particular culture conceptualizes humanness or moreover to ascertain how specific cultural differences affect attribution of humanness more broadly would require systematic and sustained study. It would require the selection of countries based on a measurable quality to be used as a between-subjects variable. Such a variable might be individualism, conservatism, or SDO. In the present study, countries were not chosen for their place on the continuum of any such variable, nor was any such variable measured. Rather, countries were chosen practically, based on contacts and availability. Such a sustained treatment of culture as described above is both interesting and relevant, but is beyond the scope of the thesis.

Final Thoughts

Taking a step back, this thesis is about humanness, what it means to be human, and what it means to acknowledge (or fail to acknowledge) the full humanness of others. In a broad sense, what it means to be human is what it means to be "us" in the most inclusive manner.

I have observed an underlying irony in this issue, that when people are asked to define what it means to be "us," part of that is our jealousies (HN) our insecurities (HU/HN), our ignorance (HU) and our impulses (HN). And by these traits, when we act human, we discriminate against that which is "other." But at the same time, we define our humanness by our reason, our civility (HU), our moral sensibility (HU), our warmth (HN), and our openness (HN). And in this sense, to act human is to acknowledge and respect the humanness in all people.

Once I began to do research on the effect, I began to notice denial of humanness in everyday life, be it the reference to a criminal as a monster or the metaphor of migrants as packed like sardines into boats bound for Australian shores. It is even evident in the names we use for our own groups in others. Anthroponyms are in-group ethnic terms that are based on the unique humanness of the in-group, such as "the people" translated from the Miwok of North America (Mullen, Calogero, & Leader, 2007) or the "principal people" from the Cherokee of North America(Merloa & McGlone, 2011). Failure to acknowledge the full rich human experience of out-groups is something that happens in everyday life. While it may not result in direct violence or blatant mistreatment, it allows us to ignore suffering that we would otherwise find unacceptable. It is for this reason that infrahumanization research must continue, so that future research can offer ways to combat this passive neglect.

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APPENDIX

The Appendix shows the additional significant effects from the five-way, country by condition by valence by group by level ANOVA used to analyze Hypothesis 10.1a and 10.1b that were not theoretically relevant to the hypotheses of the study. In the study of infrahumanization, valence is only relevant in the event that it moderates the group by level interaction. These interactions have already been described in the chapter.

The interaction shown in Table A.1 shows overall more emotions being attributed to in-groups than out-groups but this being more the case for the aged adult condition than the criminal condition, and the effect being much stronger for the Spanish sample than for any of the other countries.

Table.A.1
Country X Intergroup Context X Group Interaction
$F(3,423)=3.64$, $p<.05$

Country	Inter-group Context	Group	Mean	SD
Australia	Criminal	In	0.20	0.02
		Out	0.18	0.01
	Aged	In	0.32	0.02
		Out	0.22	0.01
Spain	Criminal	In	0.43	0.02
		Out	0.16	0.02
	Aged	In	0.63	0.02
		Out	0.24	0.02
Switzerland	Criminal	In	0.18	0.02
		Out	0.15	0.02
	Aged	In	0.27	0.03
		Out	0.21	0.02
Poland	Criminal	In	0.18	0.03
		Out	0.16	0.03
	Aged	In	0.27	0.03
		Out	0.20	0.03

Table A.2 shows more positive than negative emotions being attributed overall for the Australian, Swiss and Polish samples but more negative than positive emotions attributed in the Spanish sample.

Table.A.2
Country x Valence Interaction
F(3,423)=47.79, p<.001

Country	Valence	Mean	SD
Australia	Positive	.307	.012
	Negative	.155	.010
Spain	Positive	.310	.018
	Negative	.420	.015
Switzerland	Positive	.276	.019
	Negative	.130	.016
Poland	Positive	.285	.024
	Negative	.121	.020

Table A.3 shows the interaction between inter-group context and valence of emotion. The pattern is that while there were more positive emotions attributed in the aged adult condition, there were more negative emotions attributed in the criminal condition.

Table.A.3
Inter-group Context x Valence Interaction
F(1,423)=219.04, p<.001

Inter-group Context	Valence	Mean	SD
Criminal	Positive	0.19	0.01
	Negative	0.22	0.01
Aged adults	Positive	0.40	0.01
	Negative	0.19	0.01

Table A.4 shows the group by valence interaction. In it, the in-group is attributed significantly greater levels of positive emotion than negative emotion. The out-group is attributed relatively equivalent levels of positive and negative valenced emotions.

Table A.4
Group x Valence Interaction
F(1,423)=116.32, p<.001

Group	Valence	Mean	SD
In-group	Positive	0.39	0.01
	Negative	0.23	0.01
Out-group	Positive	0.20	0.01
	Negative	0.18	0.01

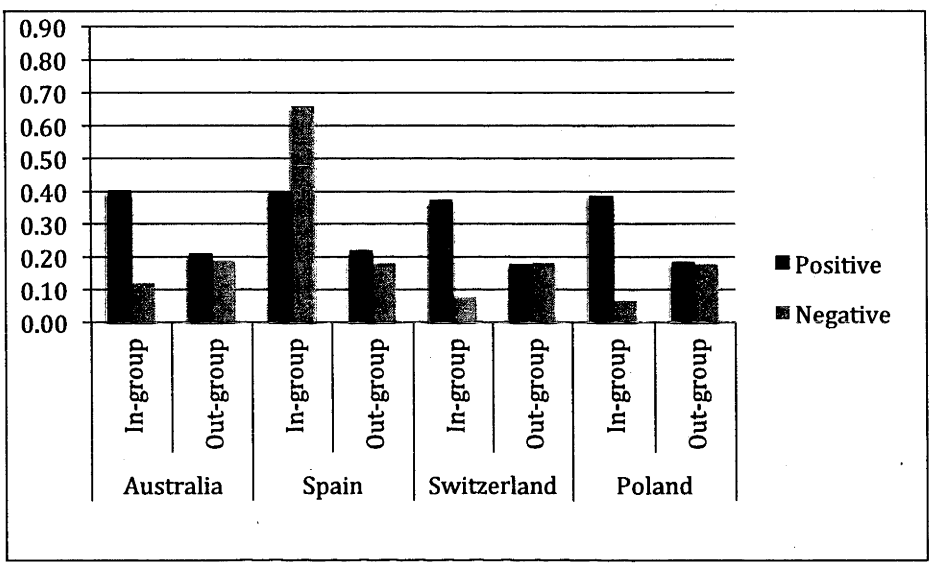

Figure A.1. The above group by valence interaction shown in Table A.4 is qualified by country, $F(3,423)=53.17$, $p<.001$. This Figure shows the group by valence by country interaction. There is a similar pattern of more positive than negative to the in-group, and relatively equal levels of positive and negative to the out-group. However, this pattern reverses in the Spanish sample with more negative than positive attributed to the in-group

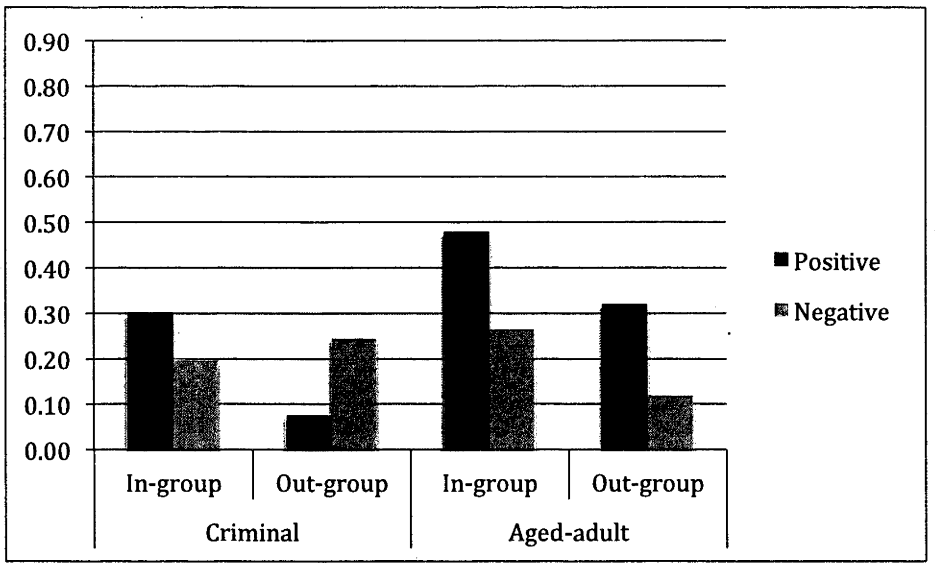

Figure A.2. The above group by valence interaction shown in table A.4 is qualified by inter-group context $F(1,423)=59.99, p<.001$. This Figure shows the group by valence by inter-group context interaction. There are more positive than negative emotions attributed to the in-group in both inter-group contexts. The difference emerges in the out-group attributions in which the aged-adult out-group is attributed more positive than negative emotions but the criminal out-group is attributed more negative than positive emotions.

Table A.5 shows the interaction of level of emotion by valence of emotion. While attribution of positive and negative primary emotions are relatively equal, there is attribution of much higher levels of positive secondary emotions than negative secondary emotions overall.

Table A.5
Level x Valence Interaction,
F(1,423)=159.19, p<.001

Level	Valence	Mean	SD
Primary	Positive	0.28	0.01
	Negative	0.29	0.01
Secondary	Positive	0.31	0.01
	Negative	0.13	0.01

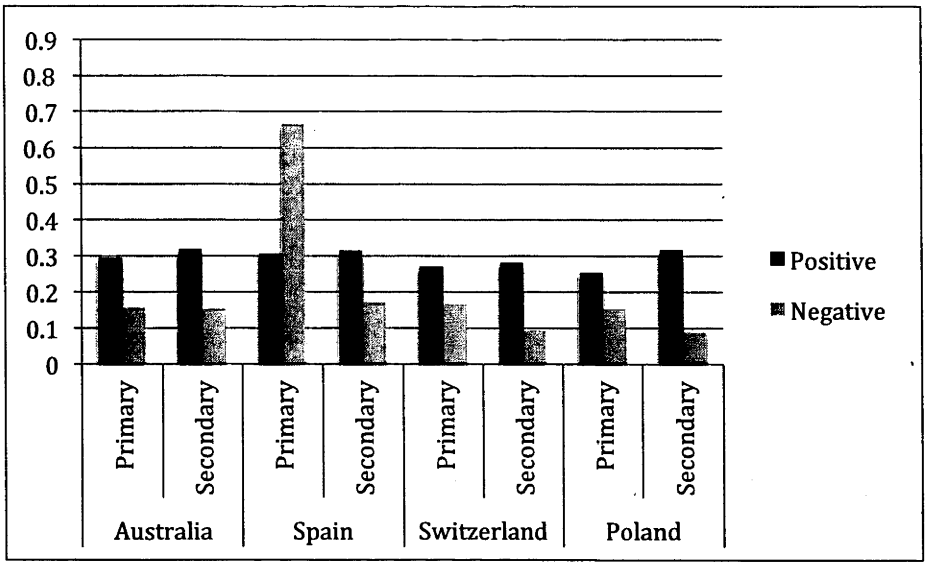

Figure A.3. This Figure shows the three way interaction of level by valence by country that qualifies the level by valence interaction shown in Table A.5, $F(3,423)=55.75$, $p<.001$. The predominant features are overall more positive than negative traits in primary and secondary emotions, but a different pattern for primary emotions in Spain with more negative emotions than positive emotions attributed.